

SEAMIC HEALTH STATISTICS

1989

Southeast Asian Medical Information Center
International Medical Foundation of Japan
Tokyo

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Tokyo-kaiji Bldg. No.6, 7-2 Shimbashi 4-chome,
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Preface

The SEAMIC HEALTH STATISTICS has been published annually since 1979 as part of the SEAMIC activities sponsored by the International Medical Foundation of Japan. It has been presenting in a uniform manner, information relevant to health developments in the countries participating in the SEAMIC. The publication has been welcomed by users both in those countries and in others.

Copying with the evolving information needs of the users, the contents of the publication have constantly been reviewed and improved. In the present issue, statistics on a few socioeconomic indicators and family planning methods have been added to Part 1. On the other hand, the section relating to laboratory statistics on gastrointestinal infections, which formed Part 3 of the publication until the 1988 issue, has been removed. It has been decided to publish those statistics separately, in view of their particular usefulness to workers engaged in infectious diseases control.

The Editorial Board wishes to express its warmest thanks to the counterparts on Health Statistics in the participating countries for their valuable contribution to the compilation of the present edition.

March ,1990

Kazuo Uemura
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SEAMIC HEALTH STATISTICS

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Explanation of Symbols

• •	_____	Category not applicable
(blank) or NA	_____	Data not available
—	_____	Nil
0		- Not nil, but less than half of the unit employed
0.0		
*	_____	Provisional or estimated

Part I

Health Statistics

1-1 Population by Sex, Rate of Population Increase, Surface Area and Density

	Latest Census						Mid-year Estimate 1988 (in thousands)	Annual Rate of Increase 1979-88 (%)	Surface Area 1988 (km ²)	Density 1988 (Persons/km ²)
	Date	Total	Male	Female	Sex Ratio	Persons per Household				
BRUNEI ⁽¹⁾	26 August 1981	192,832	102,942	89,890	114.5	5.8	241.4	a) 3.3	5,765	42
INDONESIA ⁽²⁾	Oct. - Nov. 1985	164,629,618	81,934,415	82,695,203	99.1	4.9	(3) 174,680	(4) b) 2.08	1,919,413	91
JAPAN ⁽⁵⁾	1 October 1985	121,048,923	59,497,316	61,511,607	96.7	3.2	c) 122,783	0.6	372,723	329
MALAYSIA ⁽⁶⁾ Peninsular Malaysia Sabah Sarawak	10 June 1980	13,745,241	6,918,370	6,826,871	101.3	5.4	(7) 16,921	d) 2.3	329,758	51
		11,426,613	5,731,116	5,695,497	100.6	5.3	13,959	2.2	131,598	106
		1,011,046	528,255	482,791	109.4	5.5	1,371	3.8	73,711	19
		1,307,582	658,999	648,583	101.6	5.7	1,591	2.4	124,449	13
PHILIPPINES ⁽⁸⁾	1 May 1980	48,098,460	24,128,755	23,969,705	100.7	5.6	56,004	d) 2.5	300,000	187
SINGAPORE ⁽⁹⁾	24 June 1980	2,413,945	1,231,760	1,182,185	104.2	4.7	2,647.1	1.2	626	4,231
THAILAND ⁽¹⁰⁾	1 April 1980	44,824,540	22,328,607	22,495,933	99.2	5.2	54,536	e) 1.9	513,000	106.3

Source: (1) Statistics Section, Economic Planning Unit, Ministry of Finance

(2) *Population Projection Indonesia by Province*, Central Bureau of Statistics 1985-1995

(3) *Population Projection 1980-2000 Indonesia*, Central Bureau of Statistics

(4) *Rate of Population growth Urban and rural*, Central Bureau of Statistics

(5) *Japan Statistical Yearbook 1989*, Statistics Bureau Management and Coordination Agency

(6) *General Report of the Population Census 1980, Vol. I*, Department of Statistic

(7) *Current Population Estimates Peninsular Malaysia, Sabah & Sarawak-1988*, Department of Statistics

(8) National Statistics Office

(9) *Census of Population 1980 Singapore, Yearbook of Statistics*, Singapore 1988, Department of Statistics

(10) *1980 Population and Housing Census*, National Statistics Office, Office of the Prime Minister

Note: a) Annual Rate of Increase 1988

b) Annual Rate of Increase 1985-1990

c) As of 1 October

d) Annual Rate of Increase 1978-1987

e) Annual Rate of Increase 1980-1988

1-2 Estimates of Mid-year Population

(in millions)

	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI (1)	a) 0.14	0.16	0.19	0.21	0.22	0.22	b) 0.23	0.23	0.24
INDONESIA (2)	119.47	130.50	146.36	156.37	159.83	163.37	168.35	172.01	174.68
JAPAN (3)	103.72	111.94	117.06	119.54	120.31	121.05	121.67	122.26	122.78
MALAYSIA (4)	10.39	11.90	13.76	14.89	15.27	15.68	16.12	16.53	16.92
PHILIPPINES (5)	36.68	42.07	48.32	52.06	53.35	54.67	56.00	57.06	58.72
SINGAPORE (6)	2.07	2.26	2.41	2.50	2.53	2.56	2.59	2.61	2.65
THAILAND	36.37	41.39	46.52	(7) c) 49.46	(7) c) 50.40	(7) c) 51.68	(7) c) 52.65	53.15	54.54

- Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance
 (2) *Indonesian Population Projection 1980-2000*, Central Bureau of Statistics
Indonesian Population Projection 1985-2000, Central Bureau of Statistics
 (3) *Japan Statistical Yearbook 1989*, Statistics Bureau, Management and Coordination Agency
 (4) *Current Population Estimates, Peninsular Malaysia, Sabah and Sarawak-1988*, Department of Statistics
 (5) National Statistics Office
 (6) *Yearbook of Statistics Singapore 1988*, Department of Statistics

- (7) *Report of Working Group on Population Projections*, Office of the National Economic and Social Development Board.

Note : a) For 1981, Population Census
 b) Population Survey
 c) Estimates based on total population figures, 1980
Population & Housing Census, National Statistical Office

1-3 Population Projection

(in thousands)

	1990	1995	2000	2005	2010	2015	2020	2025	2030
BRUNEI (1)	254	295	337	a) 348.2	NA	NA	NA	NA	NA
INDONESIA (2)	183,457	202,746	222,753	248,897	276,153	306,394	339,946	384,273	NA
JAPAN (3) b)	124,225	127,565	131,192	131,247	135,823	135,938	135,304	134,642	134,067
MALAYSIA (4)	17,444	19,748	22,454	NA	NA	NA	NA	NA	NA
PHILIPPINES (5)	61,480	68,424	75,224	81,591	87,206	92,430	97,682	102,686	107,123
SINGAPORE (6)	2,717	NA	2,995	NA	3,151		3,232		3,214
THAILAND (7)	56,340	60,506	64,389	67,910	70,865	73,208			

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance

(2) Based on Population Projection, Central Bureau of Statistics
Indonesia, Calculated by Centre for Health Data(3) *Future Population for Japan*, Provisionally Prepared in December
1986, Institute of Population Problems, Ministry of Health and Welfare(4) Information and Documentation System Unit,
Planning and Development Division, Ministry of Health(5) Based on Population Projections, (*Series 2 : Moderate Fertility Decline and
Moderate Mortality Decline*), National Statistics Office, Manila

(6) Population Planning Unit, Ministry of Health

(7) *Report of Working Group on Population Projections*,
Office of the National Economic and Social Development Board, 1985

Note : a) Year : 2001

b) Population on 1 October

1 - 4 Population by Age and Sex

	Year	Sex	Age								
			All Ages	0	1—4	5—9	10—14	15—19	20—24	25—29	30—34
(1) BRUNEI	1988	T	241.4	32.6	29.5	26.0	23.3	28.0	25.5	21.7	
		M	124.6	16.6	15.1	13.1	11.5	14.3	13.8	11.1	
		F	116.8	16.0	14.4	12.9	11.8	13.7	11.7	10.6	
(2) INDONESIA	1988	T	175,588.8	23,047.9	21,285.3	21,553.8	18,912.6	15,978.1	14,206.9	12,417.6	
		M	87,425.3	11,743.2	10,911.3	11,052.2	9,529.1	7,729.2	6,738.4	6,024.1	
		F	88,163.5	11,304.7	10,374.0	10,501.6	9,383.5	8,248.9	7,468.5	6,393.5	
(3) a) JAPAN	1988	T	122,026	6,926	7,713	9,204	9,829	8,521	7,783	7,924	
		M	59,964	3,553	3,952	4,718	5,041	4,350	3,941	3,997	
		F	62,062	3,373	3,761	4,487	4,788	4,171	3,842	3,927	
(4) MALAYSIA	1988	T	16,921.3	2,386.3	2,040.1	1,878.8	1,772.4	1,661.7	1,474.7	1,245.9	
		M	8,527.9	1,230.7	1,049.2	960.6	905.3	839.7	720.8	607.7	
		F	8,393.3	1,155.7	991.0	918.2	867.1	822.1	753.9	638.1	
(5) PHILIPPINES	1987	T	57,356.0	1,709.1	6,523.6	7,669.0	6,916.3	6,160.6	5,478.4	4,787.2	4,094.6
		M	28,796.0	875.8	3,309.6	3,913.1	3,559.1	3,159.9	2,720.6	2,299.9	2,004.0
		F	28,560.1	833.4	3,214.0	3,755.9	3,357.2	3,000.7	2,757.8	2,487.3	2,090.6
(6) SINGAPORE	1988	T	2,647.1	47.7	161.7	200.2	202.3	225.0	258.5	296.5	280.9
		M	1,347.4	24.7	83.8	104.4	104.8	115.9	132.6	153.1	143.8
		F	1,299.7	23.0	77.9	95.8	97.5	109.1	125.9	143.4	137.1
(7) THAILAND	1988	T	54,536	6,343	6,347	6,190	6,129	5,778	4,892	4,162	
		M	27,302	3,217	3,210	3,145	3,124	2,937	2,466	2,076	
		F	27,234	3,126	3,137	3,045	3,005	2,841	2,426	2,086	

Source : (1) Statistics Sectin, Economic Planning Unit, Ministry of Finance

(2) *Population Projection, Indonesia by Province 1985-1995*

Central Bureau of Statistics, p 116-118.

(3) *Vital Statistics 1988*, Ministry of Health and Welfare

(4) Current Population Estimates, Peninsular Malaysia, Sabah & Sarawak - 1988,
Department of Statistics

(5) National Statistics Office

(6) Department of Statistics

(7) *Report of Working Group on Poptation Projections*,

Office of the National Economics and Social Development Board

Note : a) Japanese Population Estimtes of 1 October 1988.

(in thousands)

Age										
35—39	40—44	45—49	50—54	55—59	60—64	65—69	70—74	75—79	80—84	85+
15.9	10.1	8.0	6.0	5.0	3.5	2.5	3.8			
8.4	5.4	4.3	3.2	2.6	1.9	1.5	1.8			
7.5	4.7	3.7	2.8	2.4	1.6	1.0	2.0			
10,057.4	8,409.2	7,411.7	6,368.7	5,251.5	4,132.9	3,034.9	2,058.1	1,461.8		
5,039.2	4,248.1	3,694.3	3,129.0	2,540.4	1,980.0	1,449.3	963.3	653.9		
5,018.2	4,161.1	3,717.4	3,239.7	2,711.1	2,152.9	1,585.6	1,094.8	807.9		
10,209	9,527	8,793	8,110	7,460	6,293	4,593	3,674	2,841	1,617	1,004
5,130	4,772	4,373	4,012	3,657	2,971	1,905	1,529	1,133	608	323
5,080	4,755	4,421	4,098	3,803	3,327	2,687	2,145	1,708	1,009	681
1,029.4	777.6	672.9	561.6	438.3	338.8	267.1	163.8	119.8	92.0	
513.6	396.5	344.1	280.8	212.8	166.6	125.4	77.7	55.6	40.5	
515.7	381.1	328.7	280.8	225.6	172.2	141.6	86.0	64.2	51.3	
3,259.1	2,540.6	2,129.2	1,634.1	1,333.9	1,054.8	816.2	1,249.3			
1,642.2	1,287.1	1,070.8	798.0	662.2	506.6	384.0	603.1			
1,616.9	1,253.5	1,058.3	836.1	671.7	548.2	432.3	646.2			
236.5	168.5	140.4	111.8	96.2	73.9	56.7	41.7	29.3	13.4	5.9
120.1	85.4	70.3	56.3	48.7	37.4	27.7	19.1	12.6	5.1	1.6
116.4	83.1	70.1	55.5	47.5	36.5	29.0	22.6	16.7	8.3	4.3
3,319	2,550	2,153	1,934	1,546	1,187	827	576	603		
1,657	1,279	1,063	932	739	566	387	259	245		
1,662	1,271	1,090	1,002	807	621	440	317	358		

1 - 5 Urban and Total Population

(in thousands)

	1960			1970			1980			1985		
	Total	Urban	(%)	Total	Urban	(%)	Total	Urban	(%)	Total	Urban	(%)
BRUNEI (1)	84	37	43.6	a) 136	87	63.6	b) 193	115	59.4			
INDONESIA (2)	c) 97,085	14,358	14.8	119,143	20,733	17.4	146,776	32,846	22.4	(3) d) 175,588	50,456	28.7
JAPAN (4)	94,300	59,698	63.3	104,666	75,429	72.1	117,600	89,187	76.2	121,049	92,889	76.7
MALAYSIA (5) Peninsular Malaysia Sabah Sarawak	8,170	2,060	25.2	10,439	2,787	26.7	13,745	4,687	34.1	(6) 15,791	5,912	37.4
				8,810	2,530	28.7	11,426	4,250	37.2	12,969	5,326	41.1
				653	107	16.7	1,011	208	20.6	1,280	289	22.6
				975	149	15.4	1,307	230	17.6	1,543	296	19.2
PHILIPPINES (7)	28,098	8,513	30.3	37,540	12,366	32.9	48,098	17,944	37.3	54,668	21,821	39.9
SINGAPORE (8)	1,446	1,132	78.0	2,075	1,562	75.0	2,414	2,414	100.0	2,558	2,558	100.0
THAILAND	(9) 26,258	3,274	12.5	(10) 34,397	4,553	13.2	(11) 44,824	7,633	17.0	53,870	9,697	18.0

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance
 (2) *Population of Indonesia*, Central Bureau of Statistics
 (3) *Statistical Yearbook of Indonesia 1988*, Central Bureau of Statistics p.50 - 51
 (4) *Japan Statistical Yearbook 1988*, Management and Coordination Agency
 (5) *General Report of the Population Census 1980, Vol. I*, Department of Statistics
 (6) *Fifth Malaysia Plan Report 1986 - 1990*
 (7) National Statistics Office
 (8) *Report on the Census of Population 1970, Singapore, Vol. I*, Department of Statistics

(9) *1960 Population Census*, Central Statistics Office, National Economic Development Board
 (10) *1970 Population & Housing Census*, National Statistical Office, Office of the Prime Minister
 (11) *1980 Population & Housing Census*, National Statistical Office, Office of the Prime Minister

Note : a) For 1971
 b) For 1981
 c) For 1957
 d) For 1988

Fig.1 Annual Change of Death Rates (per 1,000)

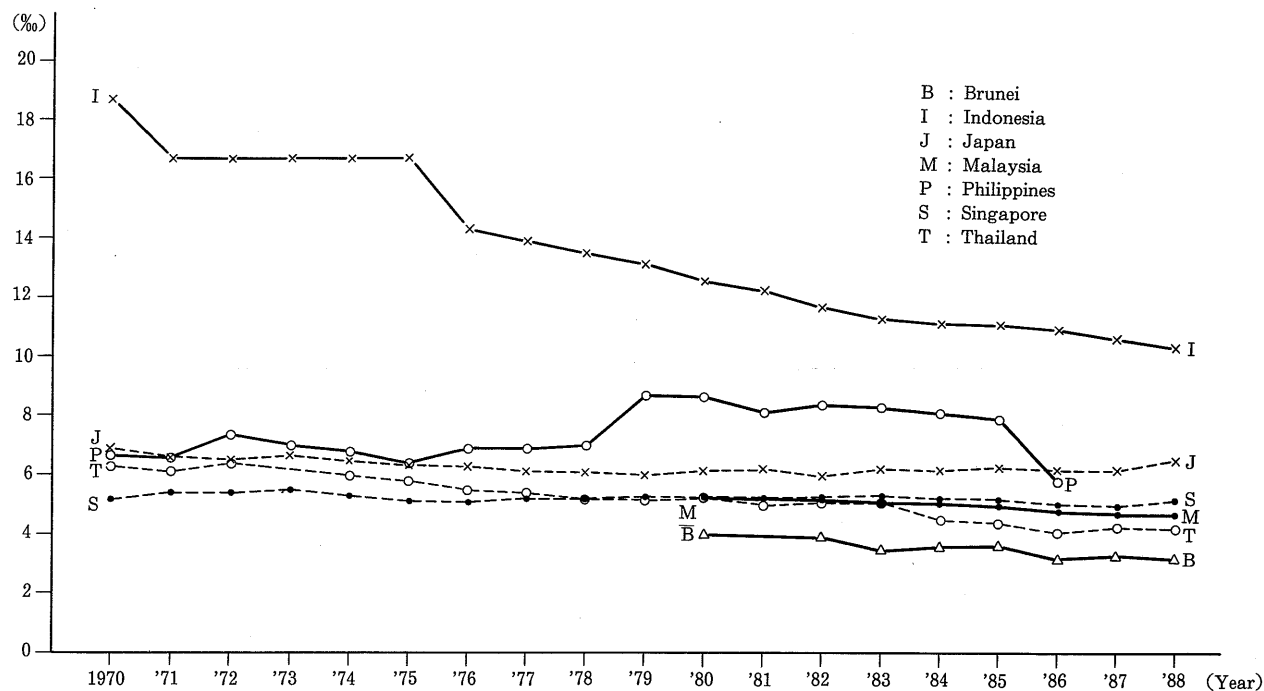


Fig.2 Population Pyramid

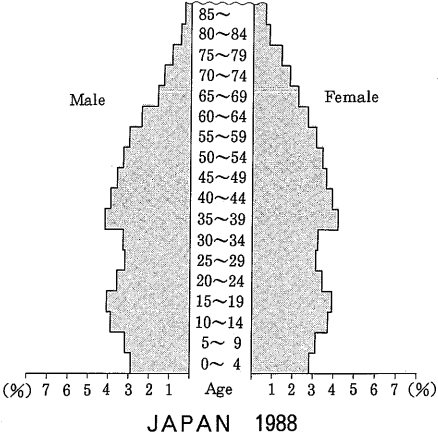
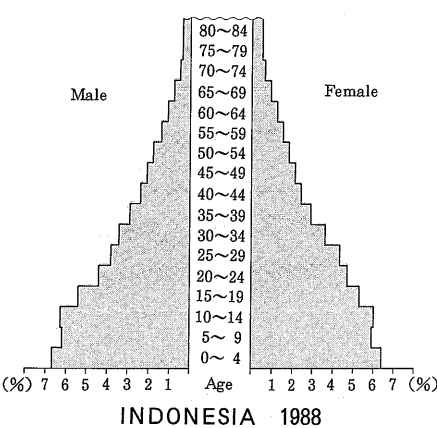
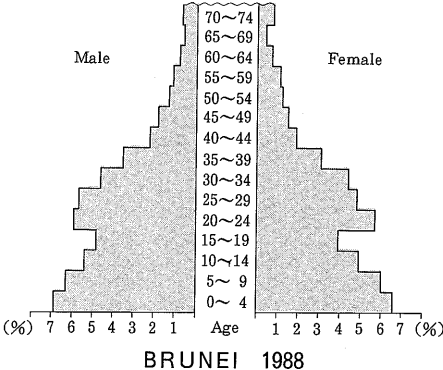
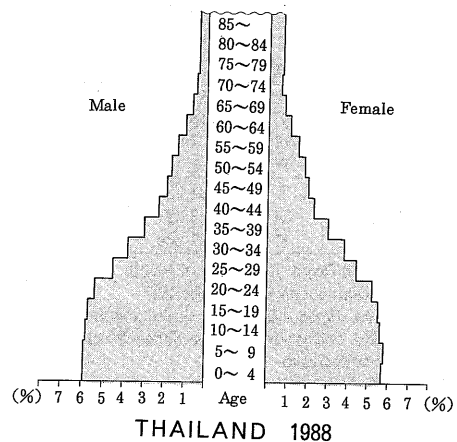
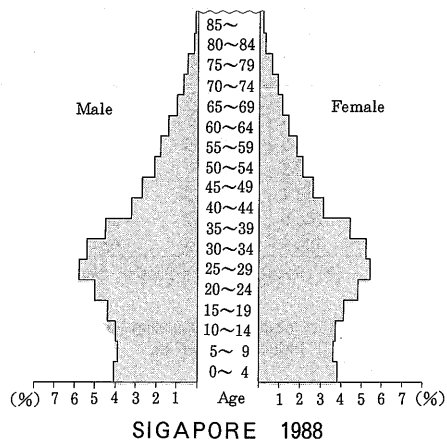
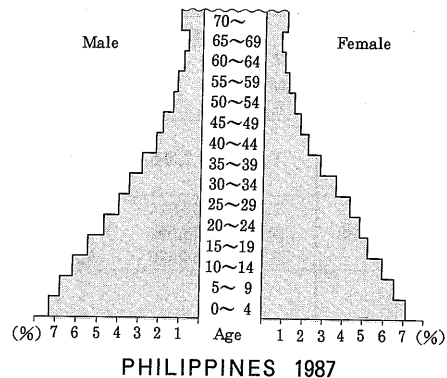
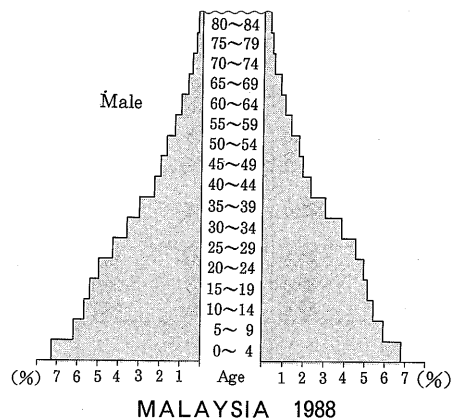


Fig.2 Population Pyramid



2 - 1 Deaths and Death Rates by Age

	Year	Sex	All ages		0		1-4		5-14		15-24	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI (1)	1988	T	778	322.3	63		193.3		26	46.8	35	68.2
		M	477	382.8	34		204.8		13	46.1	25	97.0
		F	301	257.7	29		181.3		13	47.6	10	39.2
INDONESIA (2 a)	1986	T	2,055	703.0	571	7,180.0	324	1,060.0	124	160.0	97	180.0
JAPAN (3)	1988	T	793,014	649.9	6,265	476.8	2,551	45.4	2,840	16.8	9,204	50.1
		M	428,094	713.9	3,434	508.8	1,466	50.9	1,746	20.1	6,763	72.0
		F	364,920	588.0	2,831	443.0	1,085	39.6	1,094	13.3	2,441	27.2
MALAYSIA Peninsular Malaysia Sabah Sarawak (4)	1987	T	65,282	478.1	5,625	1,435.2	1,609	106.0	1,638	52.3	2,641	94.1
		T	5,181	392.6	1,062	2,022.2	403	206.4	207	61.6	277	114.5
		T	4,998	321.9	400	950.9	80	50.4	105	28.2	204	59.8
PHILIPPINES (5)	1987	T	335,254	584.5	50,803	2,972.4	42,469	651.0	17,716	121.5	18,197	156.3
		M	197,275	685.1	29,367	3,353.3	22,485	679.4	9,895	132.4	12,405	210.9
		F	137,979	483.1	21,436	2,572.2	19,984	621.8	7,821	109.9	5,792	100.6
SINGAPORE (6)	1988	T	13,690 b)	517.2	368 b)	771.5	72	44.5	97	24.1	314	64.9
		M	7,585	562.9	194	785.4	36	43.0	50	23.9	220	88.5
		F	6,104	469.6	173	752.2	36	46.2	47	24.3	94	40.0
THAILAND (7)	1988	T	231,227	424.0	13,643		215.1		6,833	54.5	13,769	115.6
		M	133,721	489.8	7,739		240.6		3,907	61.5	9,572	157.9
		F	97,506	358.0	5,904		188.9		2,926	47.3	4,197	71.8

Source : (1) Birth and Death Registry, Ministry of Health

(2) Household Health Survey in Indonesia 1986

(3) *Vital Statistics, Japan*, Ministry of Health and Welfare 1988

(4) *Vital Statistics, Peninsular Malaysia, Sabah & Sarawak-1987*,
Department of Statistics

(5) *Philippine Health Statistics*, Department of Health 1986,
Health Intelligence Service.

(6) Department of Statistics, Singapore

(7) Health Statistics Division, Ministry of Public Health

Note : a) Calculated by sampling survey

b) Include unknown sex

(rate per 100,000 population)

25—34		35—44		45—54		55—64		65—74		75 & over		Unknown	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Total	Rate
41	86.9	65	250.0	59	421.4	123	1,447.0	366	5,809.0				
30	120.5	43	311.6	38	506.7	78	1,733.3	216	6,545.5				
11	49.3	22	180.3	21	323.0	45	1,125.0	150	5,000.0				
98	225.4	109	371.5	181	810.2	186	1,248.2	149	2,048.1	216	6,844.1	—	—
9,773	62.2	24,983	126.6	54,396	321.8	105,808	769.1	156,650	1,894.9	420,065	7,690.7	479	
6,416	80.8	15,957	161.1	36,102	430.6	71,166	1,073.7	91,401	2,661.6	193,220	9,361.4	423	
3,357	43.2	9,026	91.8	18,294	214.7	34,642	485.9	65,249	1,350.4	225,845	6,675.8	56	
2,998	137.3	3,568	245.6	5,901	588.4	10,105	1,569.8	14,198	4,031.6	16,775	9,931.4	224	
397	186.4	326	273.9	573	681.3	634	1,393.5	643	2,647.1	592	7,355.9	67	
211	89.7	317	201.7	486	462.3	828	1,163.4	1,160	2,593.4	1,160	5,263.2	47	
22,643	254.9	22,715	391.7	27,675	735.4	33,039	1,383.2	99,984	4,840.6			13	
15,756	366.1	15,338	523.6	18,381	983.6	21,126	1,807.5	52,514	5,320.4			8	
6,887	150.4	7,377	257.0	9,294	490.6	11,913	976.6	47,470	4,401.5			5	
506	87.6	719	177.5	1,200	475.8	2,306	1,355.7	3,351	3,405.5	4,695	9,660.5	62	
323	108.8	452	220.0	745	588.5	1,485	1,724.7	1,936	4,136.8	2,099	10,875.6	45	
183	65.2	267	133.8	455	362.3	821	977.4	1,415	2,742.2	2,596	8,860.1	17	
15,602	172.3	17,069	290.8	25,776	630.7	34,816	1,273.9	41,134	2,931.9	57,709	9,650.3	4,876	
11,230	247.2	11,301	384.9	16,037	803.9	21,082	1,615.5	23,244	3,598.1	26,621	10,865.7	2,988	
4,372	96.9	5,968	196.9	9,739	465.5	13,734	961.8	17,890	2,363.3	31,088	8,806.8	1,888	

3 - 1 Ten Leading Causes of Death

	Year	1	2	3	4	
BRUNEI ⁽¹⁾	1988	Malignant Neoplasms	Heart Diseases	Accidents, Poisoning & Violence	Cerebrovascular Diseases	
INDONESIA ⁽²⁾	1986	Parasitic and Infectious Diseases	Diarrhoea	Respiratory Diseases	Cardiovascular Diseases	
JAPAN ⁽³⁾	1988	Malignant Neoplasms	Diseases of Heart	Cerebrovascular Diseases	Pneumonia & Bronchitis	
MALAYSIA	^(4) a) Peninsular Malaysia	1988	Heart Diseases and Diseases of Pulmonary Circulation	Certain Conditions Originating in the Perinatal Period	Cerebrovascular Diseases	Accidents
	^(4) a) Sabah	1988	Certain Conditions Originating in the Perinatal Period	Heart Diseases and Diseases of Pulmonary Circulation	Pneumonia	Septicaemia
	^(4) a) Sarawak	1988	Heart Diseases and Diseases of Pulmonary Circulation	Certain Conditions Originating in the Perinatal Period	Malignant Neoplasms	Cerebrovascular Diseases
PHILIPPINES ⁽⁵⁾	1987	Pneumonia	Heart Diseases	Diseases of the Vascular System	Tuberculosis, All Forms	
SINGAPORE ⁽⁶⁾	1988	Cancer	Heart Diseases	Cerebrovascular Diseases	Pneumonia	
THAILAND ^(7) b)	1988	Diseases of Pulmonary Circulation and other Forms of Heart Diseases	Diseases of Digestive Systems Other than Oral Cavity, Salivary Glands and Jaws	Malignant Neoplasm of Other and Unspecified Sites	Other Accident, Including Late Effect	

Source : (1) Ministry of Health
 (2) Household Health Survey Indonesia 1986
 (3) *Vital Statistics, Japan*, Ministry of Health and Welfare
 (4) Information and Documentation System Unit, Ministry of Health
 (5) *Philippine Health Statistics*, Health Intelligence Service, Department of Health
 (6) Department of Statistics, Singapore

(7) Health Statistics Division, Office of the Permanent Secretary, Ministry of Public Health

Note : a) Government hospitals only
 b) First 10 leading Cause groups of death according to ICD Basic Tabulation List, 9th Revision

5	6	7	8	9	10
Diabetes Mellitus	Pneumonia	Hypertensive Diseases	Bronchitis, Emphysema and Asthma	Congenital Anomalies	Conditions Originating in the Perinatal Period
Tuberculosis	Certain Conditions Originating in the Perinatal Period	Injuries and Accidents	Diseases of Digestive System	Neoplasms	Diseases of Nervous System
Accidents, Poisoning and Violence	Suicide	Chronic Liver Diseases & Cirrhosis of Liver	Nephritis, Nephrotic Syndrome & Nephrosis	Hypertensive Diseases	Diabetes Mellitus
Malignant Neoplasms	Septicaemia	Congenital Anomalies	Symptoms, Signs & Ill - Defined Conditions	Nephritis, Nephrotic Syndrome And Nephrosis	Pneumonia
Malignant Neoplasms	Cerebrovascular Diseases	Accidents	Tuberculosis	Symptoms, Signs and Ill - Defined Conditions	Nephritis, Nephrotic Syndrome and Nephrosis
Accidents	Septicaemia	Pneumonia	Tuberculosis	Symptoms, Signs and Ill - Defined Conditions	Congenital Anomalies
Malignant Neoplasms	Measles	Accidents	Diarrheal Diseases	Avitaminosis and Other Nutritional Deficiency	Nephritis, Nephrotic Syndrome & Nephrosis
Accidents	Diabetes Mellitus	Nephritis and Nephrosis	Bronchitis, Emphysema and Asthma	Congenital anomalies	Septicaemia
Diseases of Respiratory System Other Than the Upper Respiratory Tract	Transport Accidents	Homicide and Injury purposely Inflicted by Other Persons	Diseases of Nervous System	Cerebrovascular Diseases	Tuberculosis

[Brunei Darussalam]

4-1 Changes in the Order of Causes of Death (1)

Year Order		1980	1981	1982	1983	1984	1985	1986	1987	1988
No.1	Cause of Death	Accidents, Poisoning & Violence	Diseases of Heart	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Malignant Neoplasms
	Death Rate per 100,000 Population	36.2	38.4	43.0	31.7	32.0	37.0	39.8	40.2	43.1
No.2	Cause of Death	Diseases of Heart	Accidents, Poisoning & Violence	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart
	Death Rate per 100,000 Population	34.0	38.4	35.0	25.5	26.4	32.4	27.0	35.5	35.6
No.3	Cause of Death	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart	Diseases of Heart	Diseases of Heart	Malignant Neoplasms	Diseases of Heart	Diseases of Heart	Accidents, Poisoning & Violence
	Death Rate per 100,000 Population	32.4	25.4	30.0	24.5	26.4	28.8	24.3	32.1	29.8
No.4	Cause of Death	Certain Condition Originating in the Perinatal Period	Certain Condition Originating in the Perinatal Period	Cerebro-vascular Diseases	Pneumonia	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases
	Death Rate per 100,000 Population	28.6	19.7	27.0	15.4	16.2	18.0	19.4	15.0	17.8
No.5	Cause of Death	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Pneumonia	Cerebro-vascular Diseases	Congenital Anomalies	Pneumonia	Pneumonia	Bronchitis Emphysema & Asthma	Diabetes Mellitus
	Death Rate per 100,000 Population	23.8	19.2	14.0	13.0	13.0	13.1	12.4	12.8	12.4

[Indonesia]

4-1 Changes in the Order of Causes of Death (2)

Year		1972	1980	1985						
Order										
No.1	Cause of Death	Diarrhoea	Lower Respiratory Tract Infection	Diarrhoea						
	Death Rate per 100,000 Population	425.7	146	84.5						
No.2	Cause of Death	Lower Respiratory Tract Infection	Diarrhoea	Tuberculosis						
	Death Rate per 100,000 Population	331.1	137.9	60.2						
No.3	Causes of Death	Tuberculosis	Cardio-vascular Diseases	Diphtheria, Measles & Cough						
	Death Rate per 100,000 Population	165.6	73	53						
No.4	Cause of Death	Cardiovascular Disorder & Nervous System	Tuberculosis	Tetanus						
	Death Rate per 100,000 Population	141.9	61.7	42.1						
No.5	Cause of Death	Tetanus	Tetanus	Malaria						
	Death Rate per 100,000 Population	141.9	47.9	23.9						

Source : Household Survey

4-1 Changes in the Order of Causes of Death (3)

[Japan]

Year		1899	1920	1930	1940	1950	1960	1970	1980	1985	1987	1988
Order	Cause of Death	1899	1920	1930	1940	1950	1960	1970	1980	1985	1987	1988
No.1	Cause of Death	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Gastro-enteritis	Tuber-culosis	Tuber-culosis	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms
	Death Rate per 100,000 Population	206.1	408.6	221.4	212.9	146.4	160.7	175.8	139.5	156.1	164.2	168.4
No.2	Cause of Death	Cerebro-vascular Diseases	Gastro-enteritis	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Cerebro-vascular Diseases	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart	Diseases of Heart	Diseases of Heart
	Death Rate per 100,000 Population	170.5	254.2	200.1	185.8	127.1	100.4	116.3	139.1	117.3	118.4	129.4
No.3	Cause of Death	Tuber-culosis	Tuber-culosis	Tuber-culosis	Cerebro-vascular Diseases	Pneumonia and Bronchitis	Diseases of Heart	Diseases of Heart	Diseases of Heart	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases
	Death Rate per 100,000 Population	155.7	223.7	185.6	177.7	93.2	73.2	86.7	106.2	112.2	101.7	105.5
No.4	Cause of Death	Gastro-enteritis	Influenza	Cerebro-vascular Diseases	Gastro-enteritis	Gastro-enteritis	Pneumonia and Bronchitis	Accidents, Poisoning & Violence	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Pneumonia and Bronchitis
	Death Rate per 100,000 Population	149.7	193.7	162.8	159.2	82.4	58	42.5	33.7	42.7	44.9	51.6
No.5	Cause of Death	Senility	Cerebro-vascular Diseases	Senility	Senility	Malignant Neoplasms	Accidents, Poisoning & Violence	Pneumonia and Bronchitis	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence
	Death Rate per 100,000 Population	127.2	157.6	118.8	124.5	77.4	49.3	34.1	25.1	24.6	23.2	24.8

Source : Ministry of Health and Welfare

[Philippines]

4-1 Changes in the Order of Causes of Death (4)

Year Order		1960	1965	1970	1975	1980	1982	1983	1984	1985	1986	1987
No.1	Cause of Death	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia
	Death Rate per 100,000 Population	100.4	83.4	118.2	102	93.6	89.3	93.6	86.4	96.7	90.4	91.9
No.2	Cause of Death	Tuberculosis (All forms)	Respiratory Tuberculosis	Tuberculosis (All forms)	Tuberculosis (All forms)	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Heart
	Death Rate per 100,000 Population	92.1	83.4	80.1	69.2	60.8	72.5	62.6	58.9	66.3	69.9	67.7
No.3	Cause of Death	Gastro-enteritis & Colitis	Gastro-enteritis & Colitis	Diseases of Vascular System	Diseases of Heart	Tuberculosis (All forms)	Tuberculosis (All forms)	Tuberculosis (All forms)	Tuberculosis (All forms)	Tuberculosis (All forms)	Tuberculosis (All forms)	Diseases of Vascular System
	Death Rate per 100,000 Population	60.5	46	35.8	56.6	59.6	55.7	55	52.6	57.9	54.6	52.1
No.4	Cause of Death	Bronchitis	Bronchitis	Gastro-enteritis & Colitis	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System	Tuberculosis (All forms)
	Death Rate per 100,000 Population	57.2	43.1	35	31.8	43.8	42.4	51.9	51	49.7	52.5	50.0
No.5	Cause of Death	Beri-beri	Beri-beri	Diseases of Heart	Malignant Neoplasms	Diarrhoea	Diarrhoea	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms
	Death Rate per 100,000 Population	54.4	32.8	34	29.4	33.2	33.1	34.6	33.3	33.2	32.6	35.5

Source : *Philippine Health Statistics*, 1960-1984, Health Intelligence Service

[Singapore]

4-1 Changes in the Order of Causes of Death (5)

Year Order		1950	1955	1960	1970	1980	1983	1984	1985	1986	1987	1988
No.1	Cause of Death	Tuberculosis	Pneumonia	Cancer	Cancer	Diseases of Heart	Cancer	Diseases of Heart	Diseases of Heart	Diseases of Heart	Cancer	Cancer
	Death Rate per 100,000 Population	145	79	62	77	111	114	121	118	113	120	120
No.2	Cause of Death	Infantile Convulsions	Tuberculosis	Pneumonia	Diseases of Heart	Cancer	Diseases of Heart	Cancer	Cancer	Cancer	Diseases of Heart	Diseases of Heart
	Death Rate per 100,000 Population	133	76	56	76	106	112	110	113	112	119	117
No.3	Cause of Death	Pneumonia	Diseases of Heart	Diseases of Heart	Cerebro-vascular Disease	Cerebro-vascular Disease	Pneumonia	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease
	Death Rate per 100,000 Population	131	56	49	50	60	60	56	55	52	51	53
No.4	Cause of Death	Gastro-enteritis	Gastro-enteritis	Tuberculosis	Accidents	Pneumonia	Cerebro-vascular Disease	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia
	Death Rate per 100,000 Population	108	54	39	41	47	58	48	50	42	38	38
No.5	Cause of Death	Diseases of Early Infancy	Cancer	Gastro-enteritis	Pneumonia	Accidents	Accidents	Accidents	Accidents	Accidents	Accidents	Accidents
	Death Rate per 100,000 Population	79	50	33	41	37	43	43	42	40	36	25

Source : Household Survey

[Thailand]

4-1 Changes in the Order of Causes of Death (6)

Year Order		1930	1940	1950	1960	1970	1980	1983	1984	1985	1986	1987	1988
No.1	Cause of Death	Malaria	Malaria	Malaria	Gastro-enteritis	Accidents	Accidents	Accidents	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Pulmonar Circulation and Other Forms of Heart Diseases	
	Death Rate per 100,000 Population	342.4	277.8	195	38.7	27.2	35.9	35.4	35.3	36.4	37.4	40.3	42.1
No.2	Causes of Death	Gastro-enteritis	Gastro-enteritis	T.B. of Respiratory System	T.B. of Respiratory System	T.B. of Respiratory System	Diseases of Heart	Diseases of Heart	Accidents	Accidents and Poisoning	Malignant Neoplasms	Diseases of Digestive System Other than Oral Cavity, Salivary Gland and Jaws	
	Death Rate per 100,000 Population	159.8	168.8	65.5	34.7	20.8	31.4	33.7	31.8	28.9	27.9	19.8	18.7
No.3	Cause of Death	T.B. of Respiratory System	Dysentery	Gastro-enteritis	Pneumonia	Diarrhoea	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Accident and Poisoning	Malignant Neoplasms of Other and Unspecified Sites	
	Death Rate per 100,000 Population	79.2	110	66.1	32.5	17.6	23.6	27	26.1	27	24.8	17.8	18.7
No.4	Cause of Death	Dysentery	T.B. of Respiratory System	Pneumonia	Malaria	Diseases of Heart	T.B. of Respiratory System	T.B. of Respiratory System	T.B. of Respiratory System	T.B. of Respiratory System	T.B. of Respiratory System	Other Accident Including Late Effect	
	Death Rate per 100,000 Population	74.3	80.9	39.4	30.2	15.3	14.3	11	10.2	10.3	9.8	16.4	18.7
No.5	Cause of Death	Pneumonia	Pneumonia	Dysentery	Diseases of Heart	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Diseases of Respiratory System Other than the Upper Respiratory Tract	
	Death Rate per 100,000 Population	22	48.7	32.8	19	14.8	10	10	7.5	7.4	6.3	12.6	12.6

Source : Health Statistics Division, Ministry of Public Health

5-1 Deaths and Death Rates by Cause (ICD-9) (1)

	Year	Sex	All Causes		01-07		011		010, 019, 012-16		020-021	
					Infectious and Parasitic Diseases		Typhoid Fever		Other Intestinal Infectious Diseases		Tuberculosis of Respiratory System	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
(1) BRUNEI	1988	T	778	322.3	26	10.8	—	—	2	0.8	8	—
		M	477	382.8	18	14.4	—	—	0	—	8	—
		F	301	257.7	8	6.8	—	—	2	1.6	0	—
(2) a) INDONESIA	1988	T	3,632				82		117		115	
		M	2,070				49		58		110	
		F	1,562				33		59		45	
(3) JAPAN	1988	T	793,014	649.9	11,336	9.3	—	—	753	0.6	3,672	3.0
		M	428,094	713.9	6,877	11.5	—	—	304	0.5	2,838	4.7
		F	364,920	588.0	4,459	7.2	—	—	449	0.7	834	1.3
(4) a) Peninsular MALAYSIA	1988	T	17,617		1,683		5		57		248	
		T	2,855		617		7		99		86	
		T	1,979		168		—		5		40	
(5) PHILIPPINES	1987	T	335,254	584.5	11,715	20.4	1,111 b)	1.9	99	0.2	27,998	48.8
		M	197,275	685.1	4,729	16.4	628	2.2	60	0.2	17,553	60.9
		F	137,979	483.1	6,986	24.5	483	1.7	39	0.1	10,445	36.6
(6) SINGAPORE	1988	T	13,690 c)	517.2	430	16.2	1	0.0	24	0.9	151	5.7
		M	7,585	562.9	245	18.2	—	—	10	0.7	116	8.6
		F	6,104	469.6	185	14.2	1	0.1	14	1.1	35	2.7
(7) THAILAND	1988	T	231,227	424.0	13,293	24.4	102	0.2	1,896	3.5	4,429	8.1
		M	133,721	489.8	8,073	29.6	57	0.2	1,099	4.0	2,948	10.8
		F	97,506	358.0	5,220	19.2	45	0.2	797	2.9	1,481	5.4

Source : (1) Ministry of Health

(2) Directorate General of Medical Care, Ministry of Health

Based on 10-day sample of discharges from hospital for each quarter

(3) *Vital Statistics, Japan*, Ministry of Health and Welfare

(4) Information and Documentation System Unit, Ministry of Health

(5) *Philippine Health Statistics*, Department of Health

(6) Department of Statistics, Singapore

(7) Ministry of Public Health (official data)

Note : a) Government hospital only (p.32)

b) Include paratyphoid fever (p.32)

c) Include unknown sex (p.32, 45)

(rate per 100,000 population)

022-25,029		034		036		037		038		030-033,035,039		042		040,041,043-049	
Tuberculosis Other Forms		Whooping Cough		Meningococcal Infection		Tetanus		Septicaemia		Other Bacterial Diseases		Measles		Other Viral Diseases	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
3.3	—	—	—	2	0.8	1	0.4	12	5.0	NA	NA	—	—	NA	NA
6.4	—	—	—	2	1.6	0	0.0	7	5.6	NA	NA	—	—	NA	NA
—	—	—	—	0	0.0	1	0.9	5	4.3	NA	NA	—	—	NA	NA
6						63		38		19		2		123	
2						37		28		8		2		57	
4						26		10		11		—		66	
200	0.2	5	0.0	2	0.0	17	0.0	3,049	2.5	190	0.2	78	0.1	1,545	1.3
116	0.2	2	0.0	1	0.0	8	0.0	1,424	2.4	109	0.2	34	0.1	845	1.4
84	0.1	3	0.0	1	0.0	9	0.0	1,625	2.6	81	0.1	44	0.1	700	1.1
41		1		6		11		1,224		21		—		35	
18		—		1		14		230		6		37		18	
7		—		2		4		94		6		—		5	
699	1.2	26	0.0	89	0.1	1,026	1.8	4,326	7.5	191	0.3	12,431	21.7	270	0.5
371	1.3	13	0.0	55	0.2	694	2.4	2,321	8.1	118	0.4	6,341	22.0	154	0.5
328	1.3	13	0.0	34	0.1	332	1.2	2,005	7.0	73	0.2	6,090	21.3	116	0.4
17	0.6	—	—	2	0.1	—	—	183	6.9	6	0.2	—	—	34	1.3
5	0.4	—	—	2	0.1	—	—	80	5.9	4	0.3	—	—	18	1.3
12	0.9	—	—	—	—	—	—	103	7.9	2	0.2	—	—	16	1.2
66	0.1	13	0.0	1	0.0	332	0.6	3,131	5.8	146	0.3	42	0.1	737	1.3
46	0.2	6	0.0	—	—	210	0.8	1,703	6.3	86	0.3	24	0.1	405	1.5
20	0.1	7	0.0	1	0.0	122	0.4	1,428	5.3	60	0.3	18	0.1	332	1.2

5-1 Deaths and Death Rates by Cause (ICD-9) (2)

	Year	Sex	052		050,051,053,054,059		06		07		08-14	
			Malaria		Other Arthropodborne Diseases		Venereal Diseases		Other Infectious and Parasitic Diseases		Malignant Neoplasms	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1988	T	NA	NA	NA	NA	NA	NA	1	0.4	104	43.1
		M	NA	NA	NA	NA	NA	NA	1	0.8	52	41.7
		F	NA	NA	NA	NA	NA	NA	—	—	52	44.5
INDONESIA	1988	T	15		—	—	—	—	7			
		M	9		—	—	—	—	7			
		F	6		—	—	—	—	0			
JAPAN	1988	T	1	0.0	3	0.0	52	0.0	1,769	1.4	205,470	168.4
		M	1	0.0	1	0.0	32	0.1	1,162	1.9	122,015	203.5
		F	—	—	2	0.0	20	0.0	609	0.1	83,455	134.5
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	T	16		1		1		16		150	
		T	89		11		1		—		26	
		T	1		—		—		4		18	
PHILIPPINES	1987	T	1,226	2.1	37	0.1	—	—	123	0.4	20,367	35.5
		M	770	2.7	25	0.1	—	—	144	0.5	10,970	38.1
		F	456	1.6	12	0.0	—	—	79	0.3	9,397	32.9
SINGAPORE	1988	T	5	0.2	1	0.0	3	0.1	3	0.1	3,194	120.7
		M	5	0.4	—	—	3	0.2	2	0.1	1,860	138.0
		F	—	—	1	0.1	—	—	1	0.1	1,334	102.6
THAILAND	1988	T	1,464	2.7	—	—	28	0.1	906	1.7	18,285	33.5
		M	969	3.5	—	—	16	0.1	504	1.8	10,542	38.6
		F	495	1.8	—	—	12	0.0	402	1.5	7,743	28.4

(rate per 100,000 population)

08	091	091	037	094	095	100	101
Malignant Neoplasm of Lip, Oral Cavity and Pharynx	Malignant Neoplasm of Oesophagus	Malignant Neoplasm of Stomach	Malignant Neoplasm of Colon	Malignant Neoplasm of Rectum, Rectosigmoid Junction & Anus	Malignant Neoplasm of Liver, Specified as Primary	Malignant Neoplasm of Larynx	Malignant Neoplasm of Trachea, Bronchus and Lung
Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate
NA NA	NA NA	6 2.5	6 2.5	1 0.4	NA NA	NA NA	19 7.9
NA NA	NA NA	5 4.0	3 2.4	1 0.8	NA NA	NA NA	13 10.4
NA NA	NA NA	1 0.9	3 2.6	— —	NA NA	NA NA	6 5.1
5	1	4	6	6	22	1	24
5	—	4	5	2	15	1	16
—	1	—	1	4	7	—	8
2,446 2.0	6,824 5.6	48,004 39.3	13,640 11.2	8,659 7.1	15,935 13.1	856 0.7	33,388 27.4
1,787 3.0	5,625 9.4	30,009 50.0	6,747 11.3	5,070 8.5	12,012 20.0	760 1.3	24,333 40.6
659 1.1	1,199 1.9	17,995 29.0	6,893 11.1	3,589 5.8	3,923 6.3	96 0.2	9,055 14.6
150	65	117	63	65	103	34	345
26	5	17	19	6	20	2	48
18	6	21	13	6	10	4	36
1,368 2.4	267 0.5	1,461 2.5	238 0.4	505 0.9	— —	160 0.3	2,840 d) 5.0
813 2.8	163 0.6	854 3.0	130 0.4	269 0.9	— —	111 0.4	2,029 7.0
555 1.9	104 0.4	607 2.1	108 0.4	236 0.8	— —	49 0.2	811 2.8
199 7.5	111 4.2	368 13.9	274 10.4	118 4.5	79 3.0	33 1.2	713 26.9
150 11.1	98 7.3	205 15.2	138 10.2	71 5.3	63 4.7	28 2.1	507 37.6
49 3.8	13 1.0	163 12.5	136 10.5	47 3.6	16 1.2	5 0.4	206 15.8
384 0.7	191 0.4	323 0.6	619 1.1	13 0.0	2,932 5.4	38 0.1	1,412 2.6
243 0.9	139 0.5	263 0.8	375 1.4	7 0.0	2,053 7.5	34 0.1	990 3.6
141 0.5	52 0.2	110 0.4	244 0.9	6 0.0	879 3.2	4 0.1	422 1.5

5-1 Deaths and Death Rates by Cause (ICD-9) (3)

	Year	Sex	113		120		122		124		126	
			Malignant Neoplasm of Female Breast	Rate	Malignant Neoplasm of Cervix Uteri	Rate	Malignant Neoplasm of Uterus, Other and Unspec.	Rate	Malignant Neoplasm of Prostate	Rate	Malignant Neoplasm of Bladder	Rate
BRUNEI	1988	T	9	3.7	5	2.1	NA	NA			NA	NA
		M	—	—	—	—	NA	NA			NA	NA
		F	9	7.7	5	4.3	NA	NA			NA	NA
INDONESIA	1988	T	10		7		1		1		1	
		M	—	—	—	—	—	—	1		1	
		F	10		7		1		—	—	—	—
JAPAN	1988	T	5,602	4.6	1,831	1.5	2,867	2.3	3,035	2.5	2,725	2.2
		M	—	—	—	—	—	—	3,035	5.1	1,851	3.1
		F	5,602	9.0	1,831	3.0	2,867	4.6	—	—	874	1.4
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	T	100		85		11		26		11	
		T	8		7		1		—	—	4	
		T	2		5		3		—	—	4	
PHILIPPINES	1987	T	1,433	2.5	337	0.6	868	1.5	320	0.6	—	—
		M	—	—	—	—	—	—	320	1.1	—	—
		F	1,433	5.0	337	1.2	868	3.0	—	—	—	—
SINGAPORE	1988	T	170	6.4	97	3.7	36	1.4	40	1.5	42	1.6
		M	—	—	—	—	—	—	40	3.0	29	2.2
		F	170	13.1	97	7.5	36	2.8	—	—	13	1.0
THAILAND	1988	T	214	0.4	185	0.3	404	0.7	31	0.1	56	0.1
		M	—	—	—	—	—	—	31	0.1	41	0.2
		F	214	0.8	185	0.7	404	1.5	—	—	15	0.1

(per 100,000 population)

Rest		141		140, 149		15-17		181		180, 182, 183 189		191		192	
Malignant Neoplasm of Other Sites		Leukaemia		Other Malignant Neoplasms of Lymphatic and Haemopoietic		Benign Neoplasm, Other and Unspecific Neoplasms		Diabetes Mellitus		Other Endocrine and Metabolic Diseases		Nutritional Marasmus		Other Protein-calorie Malnutrition	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
		5	2.1	53	22.0	NA	NA	30	12.4	NA	NA	—	—	—	—
		3	2.4	27	21.7	NA	NA	21	16.9	NA	NA	—	—	—	—
		2	1.7	26	22.3	NA	NA	9	7.7	NA	NA	—	—	—	—
52		15		9		49		52		17		2		6	
27		6		2		30		28		10		1		5	
25		9		7		19		24		7		1		1	
47,436	38.9	5,581	4.6	6,677	5.5	6,786	5.6	9,647	7.9	1,841	1.5	—	—	217	0.2
23,776	39.7	3,223	5.4	3,823	6.4	3,779	6.3	4,569	7.6	869	1.4	—	—	127	0.2
23,660	38.1	2,358	3.8	2,854	4.6	3,007	4.8	5,078	8.2	972	1.6	—	—	90	0.1
117		111		49		22		191		69		1		15	
10		13		8		1		18		8		1		1	
10		28		13		1		18		9		—	—	—	—
7,421	12.9	1,450	2.5	299	0.5	144	0.2	3,181	5.5	3,207	5.6	282	0.5	613	1.1
4,742	16.5	722	2.5	184	0.6	77	0.3	1,476	5.1	1,826	6.3	149	0.5	332	1.1
2,679	9.4	728	2.5	115	0.4	67	0.2	1,705	6.0	1,381	4.8	133	0.5	281	1.0
713	26.9	104	3.9	97	3.7	39	1.5	501	18.9	17	0.6	—	—	7	0.3
407	30.2	67	5.0	57	4.2	15	1.1	189	14.0	9	0.7	—	—	3	0.2
306	23.5	37	2.8	40	3.1	24	1.8	312	24.0	8	0.6	—	—	4	0.3
10,838	19.9	489	0.9	155	0.3	1	0.0	2,256	4.1	19	0.0	40	0.1	28	0.1
6,065	22.2	252	0.9	99	0.4	—	—	966	3.5	8	0.0	19	0.1	15	0.1
4,773	17.5	237	0.9	56	0.2	1	0.0	1,290	4.7	11	0.0	21	0.1	13	0.0

5-1 Deaths and Death Rates by Cause (ICD-9) (4)

	Year	Sex	190, 193		200		209		21		220	
			Other Nutritional Deficiency		Anaemias		Other Diseases of Blood and Blood-forming Organs		Mental Disorders		Meningitis	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1988	T	NA	NA	1	0.4	NA	NA	NA	NA	—	—
		M	NA	NA	—	—	NA	NA	NA	NA	—	—
		F	NA	NA	1	0.9	NA	NA	NA	NA	—	—
INDONESIA	1988	T	1		26		3		11		61	
		M	1		14		—	—	4		25	
		F	—	—	12		3		7		36	
JAPAN	1988	T	228	0.2	1,629	1.3	1,857	1.5	3,047	2.5	483	0.4
		M	121	0.2	737	1.2	964	1.6	1,361	2.3	262	0.4
		F	107	0.2	892	1.4	893	1.4	1,686	2.7	221	0.4
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	T	10		51		47		22		126	
		T	4		26		15		5		47	
		T	2		7		12		3		24	
PHILIPPINES	1987	T	4,092	7.1	2,432	4.2	405	0.7	312	0.5	2,481	4.3
		M	2,211	7.7	1,187	4.1	219	0.8	272	0.9	1,352	4.7
		F	1,881	6.6	1,245	4.3	186	0.6	40	0.1	1,129	4.0
SINGAPORE	1988	T	—	—	20	0.8	15	0.6	15	0.6	22	0.8
		M	—	—	8	0.6	6	0.4	6	0.4	13	1.0
		F	—	—	12	0.9	9	0.7	9	0.7	9	0.7
THAILAND	1988	T	394	0.7	339	0.6	79	0.1	408	0.7	387	0.7
		M	202	0.7	162	0.6	43	0.2	341	1.2	261	1.0
		F	192	0.7	177	0.6	36	0.1	67	0.2	126	0.5

(rate per 100,000 population)

223		225		221, 222, 224 229, 23, 24		25-30		250		251		26		270	
Multiple Sclerosis		Epilepsy		Other Diseases of Nervous System and Sense Organs		Diseases of Circulatory System		Acute Rheumatic Fever		Chronic Rheumatic Heart Disease		Hypertensive Disease		Acute Myocardial Infarction	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NA	NA	NA	NA	NA	NA	196	81.2	—	—	4	1.7	25	10.4	64	26.5
NA	NA	NA	NA	NA	NA	130	104.3	—	—	3	2.4	17	13.6	45	36.1
NA	NA	NA	NA	NA	NA	66	56.5	—	—	1	0.9	8	6.8	19	16.3
—	—	3	—	172	—	—	—	—	—	7	—	36	—	46	—
—	—	2	—	89	—	—	—	—	—	—	—	16	—	33	—
—	—	1	—	83	—	—	—	—	—	7	—	20	—	13	—
59	0.0	415	0.3	5,556	4.6	304,525	249.6	41	0.0	1,467	1.2	10,258	8.4	31,662	25.9
22	0.0	242	0.4	3,032	5.1	147,565	246.1	15	0.0	436	0.7	3,892	6.5	17,805	29.7
37	0.1	173	0.3	2,524	4.1	156,960	252.9	26	0.0	1,031	1.7	6,366	10.3	13,857	22.3
5	—	21	—	217	—	5,181	—	4	—	92	—	178	—	1,724	—
—	—	1	—	42	—	463	—	1	—	5	—	28	—	95	—
1	—	—	—	22	—	577	—	—	—	14	—	13	—	81	—
—	—	798	1.4	1,931	3.4	745	1.3	27	0.0	2,084	3.6	13,919	24.3	11,000	19.2
—	—	467	1.6	1,132	3.9	478	1.6	18	0.1	987	3.4	8,003	27.8	7,119	24.7
—	—	331	1.1	799	2.8	267	0.9	9	0.0	1,097	3.8	5,916	20.7	3,881	13.6
1	0.0	17	0.6	93	3.5	4,847	183.1	1	0.0	71	2.7	338	12.8	1,718	64.9
1	0.1	7	0.5	47	3.5	2,582	191.6	1	0.1	20	1.5	168	12.5	1,003	74.4
—	—	10	0.8	46	3.5	2,265	174.3	—	—	51	3.9	170	13.1	715	55.0
—	—	315	0.6	4,733	8.7	33,458	61.4	10	0.0	304	0.6	2,012	3.7	507	0.9
—	—	210	0.8	2,842	10.4	20,372	74.6	3	0.0	154	0.6	1,160	4.2	326	1.2
—	—	105	0.4	1,891	6.9	13,086	48.1	7	0.0	150	0.6	852	3.1	181	0.7

5-1 Deaths and Death Rates by Cause (ICD-9) (5)

	Year	Sex	279		28		29		300		301, 302	
			Other Ischaemic Heart Diseases		Diseases of Pulmonary Circulation and Other Forms of Heart Diseases		Cerebrovascular Diseases		Atherosclerosis		Embolism, Thrombosis and Other Diseases of Arteries, Arterioles	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1988	T	18	7.5	NA	NA	43	17.8	3	1.2	NA	NA
		M	12	9.6	NA	NA	30	24.1	2	1.6	NA	NA
		F	6	5.1	NA	NA	13	11.1	1	0.9	NA	NA
INDONESIA	1988	T	14		191		216		2		2	
		M	9		113		130		—	—	1	
		F	5		78		131		2		1	
JAPAN	1988	T	18,982	15.6	105,809	86.7	128,695	105.5	2,635	2.2	4,328	3.5
		M	9,142	15.2	51,257	85.5	60,832	101.4	1,126	1.9	2,666	4.4
		F	9,840	15.9	54,552	87.9	67,863	109.3	1,509	2.4	1,662	2.7
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	T	184		1,226		1,666		2		9	
		T	20		39		160		—	—	—	—
		T	12		233		205		—	—	1	
PHILIPPINES	1987	T	4,502	7.8	18,067	31.5	15,645	27.3	2,439	4.2	282	0.5
		M	2,318	8.0	9,894	34.3	8,986	31.2	1,128	3.9	159	0.6
		F	2,184	7.6	8,173	28.6	6,659	23.3	1,311	4.6	123	0.4
SINGAPORE	1988	T	764	28.9	427	16.1	1,414	53.4	16	0.6	68	2.6
		M	458	34.0	230	17.1	639	47.4	6	0.4	40	3.0
		F	306	23.5	197	15.2	775	59.6	10	0.8	28	2.2
THAILAND	1988	T	543	1.0	22,936	41.9	5,225	9.6	—	—	53	0.1
		M	350	1.3	13,976	51.0	3,216	11.8	—	—	30	0.1
		F	181	0.7	8,960	32.8	2,009	7.4	—	—	23	0.1

(rate per 100,000 population)

303	304, 305, 309	310-312	320	321	322	323	313-315, 319 324-327, 329
Phlebitis, Thrombophlebitis, Venous Embolism and Thrombosis	Other Diseases of Circulatory System	Acute Upper Respiratory Infection	Acute Bronchitis and Bronchiolitis	Pneumonia	Influenza	Bronchitis, Chronic and Unspecified, Emphysema and Asthma	Other Diseases of Respiratory System
Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate
NA NA	39 16.2	NA NA	NA NA	27 11.2	— —	20 8.3	NA NA
NA NA	21 16.9	NA NA	NA NA	17 13.6	— —	10 8.0	NA NA
NA NA	18 15.4	NA NA	NA NA	10 8.6	— —	10 8.6	NA NA
— —	2	7	5	216	1	45	40
— —	2	4	3	130	— —	28	25
— —	—	3	2	86	1	17	15
84 0.1	564 0.5	970 0.8	1,649 1.4	57,055 46.8	192 0.2	14,352 11.8	11,952 9.8
44 0.1	350 0.6	422 0.7	782 1.3	32,485 54.2	82 0.1	9,325 15.6	7,727 12.9
40 0.1	214 0.3	548 0.9	867 1.4	24,570 39.6	110 0.2	5,027 8.1	4,225 6.8
8	88	— —	10 0.1	542	— —	16	932
1	14	8	4	288	— —	4	107
— —	8	— —	2	80	— —	2	134
35 0.1	745 1.3	135 0.2	1,679 2.9	52,700 91.9	1,151 2.0	7,343 12.8	5,502 9.6
17 0.1	478 1.6	78 0.3	907 3.1	28,406 98.6	600 2.1	4,460 15.5	2,854 9.9
18 0.1	267 0.9	57 0.2	772 2.7	24,294 85.1	551 1.9	2,883 10.1	2,648 9.3
15 0.6	15 0.6	2 0.1	1 0.0	1,039 39.3	8 0.3	215 8.1	845 31.9
8 0.6	9 0.7	1 0.1	—	508 37.7	3 0.2	117 8.7	582 43.2
7 0.5	6 0.5	1 0.1	1 0.1	531 40.9	5 0.4	98 7.5	263 20.2
2 0.0	1,866 3.3	391 0.7	21 0.0	3,438 6.3	223 0.4	902 1.7	2,332 4.2
1 0.0	1,156 4.1	240 0.8	16 0.1	2,155 7.9	114 0.4	584 2.1	1,463 5.5
1 0.0	710 2.5	151 0.6	5 0.0	1,283 4.7	109 0.4	318 1.2	869 3.2

5-1 Deaths and Death Rates by Cause (ICD-9) (6)

	Year	Sex	341		342		343, 344		347		33, 340, 345, 346 348, 349	
			Ulcer of Stomach and Duodenum		Appendicitis		Hernia of Abdominal Cavity and Intestinal Obstruction		Chronic Liver Disease and Cirrhosis		Other Diseases of Digestive System	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1988	T	3	1.2	1	0.4	NA	NA	9	3.7	NA	NA
		M	2	1.6	1	0.8	NA	NA	7	5.6	NA	NA
		F	1	0.9	0	0.0	NA	NA	2	1.7	NA	NA
INDONESIA	1988	T	8		8		73		104		141	
		M	6		6		47		73		91	
		F	2		2		26		31		50	
JAPAN	1988	T	3,688	3.0	107	0.1	2,851	2.3	16,992	13.9	14,058	11.5
		M	1,992	3.3	59	0.1	1,315	2.2	11,689	19.5	7,102	11.8
		F	1,696	2.7	48	0.1	1,536	2.5	5,303	8.5	6,956	11.2
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	T	49		8		47		163		510	
		T	8		1		19		15		78	
		T	11		1		11		17		80	
PHILIPPINES	1987	T	5,526	9.6	439	0.8	173	0.3	2,513	4.4	4,463	7.8
		M	3,767	13.1	286	1.0	131	0.4	2,003	7.0	3,161	7.0
		F	1,759	6.1	153	0.5	42	0.1	510	1.8	1,302	4.5
SINGAPORE	1988	T	75	2.8	—	—	17	0.6	162	6.1	126	4.8
		M	42	3.1	—	—	14	1.0	115	8.5	74	5.5
		F	33	2.5	—	—	3	0.2	47	3.6	52	4.0
THAILAND	1988	T	805	1.5	88	0.2	125	0.2	4,114	7.5	5,103	9.3
		M	523	1.9	52	0.2	73	0.3	2,971	10.9	3,334	12.2
		F	282	1.0	36	0.1	52	0.2	1,143	4.2	1,769	6.5

(rate per 100,000 population)

350	351		360		37,352,353,359 361-363, 369		38		390		391		394	
Nephritis, Nephrotic Syndrome and Nephrosis	Infections of Kidney		Hyperplasia of Prostate		Other Diseases of Genito-urinary System		Abortion		Haemorrhage of Pregnancy and Childbirth		Toxaemia of Pregnancy		Complications of Puerperium	
Number Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
9 3.7	NA	NA	—	—	NA	NA	—	—	NA	NA	NA	NA	NA	NA
6 4.8	NA	NA	—	—	NA	NA	—	—	NA	NA	NA	NA	NA	NA
3 2.6	NA	NA	—	—	NA	NA	—	—	NA	NA	NA	NA	NA	NA
80	6		9		15		4		10		21		1	
43	3		9		7		—	—	—	—	—	—	—	—
37	3		—	—	8		4		10		21		1	
15,891 13.0	940	0.8	249	0.2	1,324	1.1	8	0.0	31	0.0	18	0.0	35	0.0
7,732 12.9	295	0.5	249	0.4	524	0.9	—	—	—	—	—	—	—	—
8,159 13.1	645	1.0	—	—	800	1.3	8	0.0	31	0.0	18	0.0	35	0.1
556	4		—	—	122		6		28		19		16	
62	—	—	—	—	23		1		5		1		5	
20	4		—	—	49		2		—	—	2		—	—
5,149 9.0	449	0.8	44	0.1	1,063	1.9	159	0.3	563	1.0	—	—	501	0.9
3,012 10.4	252	0.9	44	0.9	581	2.0	—	—	—	—	—	—	—	—
2,137 7.5	197	0.7	—	—	482	1.7	159	0.5	563	2.0	—	—	501	1.8
253 9.6	14	0.5	—	—	113	4.3	1	0.0	1	0.0	1	0.0	3	0.1
111 8.2	3	0.2	—	—	39	2.9	—	—	—	—	—	—	—	—
142 10.9	11	0.8	—	—	74	5.7	1	0.1	1	0.1	1	0.1	3	0.2
3,603 6.6	—	—	—	—	334	0.6	25	0.0	2	0.0	12	0.0	3	0.0
2,021 7.4	—	—	—	—	190	0.7	—	—	—	—	—	—	—	—
1,582 5.8	—	—	—	—	144	0.5	25	0.1	2	0.0	12	0.0	3	0.0

5-1 Deaths and Death Rates by Cause (ICD-9) (7)

	Year	Sex	392, 393, 399		40, 41		42		43		440	
			Other Direct Obstetric Causes		Indirect Obstetric Causes		Diseases of Skin and Subcutaneous Tissue		Diseases of Musculoskeletal System and Connective Tissue		Spina Bifida and Hydrocephalus	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1988	T	—	—	—	—	NA	NA	NA	NA	17	—
		M	—	—	—	—	NA	NA	NA	NA	7	—
		F	—	—	—	—	NA	NA	NA	NA	10	—
INDONESIA	1988	T	18	—	1	—	13	—	10	—	1	—
		M	1	—	—	—	8	—	5	—	1	—
		F	17	—	1	—	5	—	5	—	—	—
JAPAN	1988	T	15	0.0	19	0.0	612	0.5	3,289	2.7	98	0.1
		M	—	—	—	—	215	0.4	829	1.4	47	0.1
		F	15	0.0	19	0.0	397	0.6	2,460	4.0	51	0.1
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	T	19	—	4	—	11	—	21	—	18	—
		T	6	—	2	—	3	—	7	—	3	—
		T	3	—	—	—	—	—	3	—	4	—
PHILIPPINES	1987	T	—	—	—	—	374	0.6	72	0.1	—	—
		M	—	—	—	—	211	0.7	44	0.1	—	—
		F	—	—	—	—	163	0.6	28	0.1	—	—
SINGAPORE	1988	T	—	—	—	—	64	2.4	50	1.9	3	0.1
		M	—	—	—	—	22	1.6	4	0.3	3	0.2
		F	—	—	—	—	42	3.2	46	3.5	—	—
THAILAND	1988	T	192	0.4	3	0.0	158	0.3	100	0.2	1	0.0
		M	—	—	—	—	84	0.3	57	0.2	1	0.0
		F	192	0.7	3	0.0	74	0.3	43	0.2	—	—

(rate per 100,000 population)

442		441,443-447,449		453		450-452, 454 455, 459		465		460-464, 466 467, 469		E47- E53		E471	
Congenital Anomalies of Heart & Circulatory System		Other Congenital Anomalies		Birth Trauma		Other Conditions Originating in the Perinatal Period		Senility without Mention of Psychosis		Signs, Symptoms and Other ill-defined Conditions		Accidents and Adverse Effects		Motor Vehicle Traffic Accidents	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
			7.0	1	0.4	16	6.6	NA	NA	246	102.0	70	29.0	35	14.5
			5.6	1	0.8	9	7.2	NA	NA	135	108.3	60	48.2	32	25.7
			8.6	—	—	7	6.0	NA	NA	111	95.0	10	8.6	3	2.6
11		16		..	..	382		3		146		..	..	103	
6		9		..	..	207		2		73		..	..	73	
5		7		..	..	175		1		73		..	..	30	
2,137	1.8	1,412	1.2	221	0.2	1,934	1.6	26,400	21.6	4,764	3.9	30,212	24.8	13,420	11.0
1,106	1.8	705	1.2	135	0.2	1,081	1.8	8,910	14.9	2,746	4.6	21,358	35.6	9,855	16.4
1,031	1.7	707	1.1	86	0.1	853	1.4	17,490	28.2	2,018	3.3	8,854	14.3	3,565	5.7
267		338		12		1,973		66		501		1,663		1,207	
22		30		—	—	389		4		79		152		56	
7		25		2		227		2		41		132		68	
—	—	3,010	5.2	42	0.1	9,099	15.9	12,365	21.5	10,733	18.7	479	0.8	2,280	4.0
—	—	1,739	6.0	14	0.0	5,384	18.7	5,420	18.8	6,656	23.1	387	1.3	1,580	5.5
—	—	1,271	4.4	28	0.1	3,715	13.0	6,945	24.3	4,077	14.3	92	0.3	700	2.4
98	3.7	100	3.8	2	0.1	125 c)	4.7	112	4.2	83	3.1	410	15.5	242	9.1
50	3.7	46	3.4	1	0.1	73	5.4	46	3.4	42	3.1	341	25.3	198	14.7
48	3.7	54	4.2	1	0.1	51	3.9	66	5.1	41	3.2	69	5.3	44	3.4
27	0.2	1,108	2.2	—	—	1,908	3.6	65,674	120.7	40,993	74.8	28,578	52.4	5,428	10.0
15	0.2	642	2.5	—	—	1,073	4.0	30,641	112.5	24,044	87.8	21,402	78.4	4,297	15.7
12	0.2	466	1.9	—	—	835	3.2	35,033	128.9	16,949	61.9	7,176	26.3	1,131	4.2

5-1 Deaths and Death Rates by Cause (ICD-9) (8)

	Year	Sex	E 470, E 472-E 474 E 479		E 48		E 50		E 51		E 521	
			Other Transport Accidents		Accidental Poisoning		Accidental Falls		Accidents Caused by Fire and Flames		Accidental Drowning and Submersion	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1988	T	NA	NA	NA	NA	7	2.9	NA	NA	NA	NA
		M	NA	NA	NA	NA	6	4.8	NA	NA	NA	NA
		F	NA	NA	NA	NA	1	0.9	NA	NA	NA	NA
INDONESIA	1988	T	1		14		27		9		..	..
		M	1		7		24		2		..	..
		F	—	—	7		3		7		..	..
JAPAN	1988	T	1,338	1.1	622	0.5	4,047	3.3	1,183	1.0	3,021	2.5
		M	1,072	1.8	409	0.7	2,593	4.3	724	1.2	2,026	3.4
		F	266	0.4	213	0.3	1,454	2.3	459	0.7	995	1.6
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	T	4		180		111		53		3	
		T	6		26		23		6		—	—
		T	6		12		11		7		4	
PHILIPPINES	1987	T	22	0.0	100	0.2	556	1.0	73	0.1	2,373	4.1
		M	20	0.1	58	0.2	417	1.4	46	0.1	1,626	5.6
		F	2	0.0	42	0.1	139	0.5	27	0.1	747	2.6
SINGAPORE	1988	T	7	0.3	8	0.3	62	2.3	2	0.1	—	—
		M	7	0.5	8	0.6	51	3.8	1	0.1	—	—
		F	—	—	—	0.3	11	0.8	1	0.1	—	—
THAILAND	1988	T	226	0.4	78	0.1	241	0.4	159	0.3	3,118	5.7
		M	194	0.7	42	0.2	196	0.7	97	0.4	2,052	7.5
		F	32	0.1	36	0.1	45	0.2	62	0.2	1,066	3.9

(rate per 100,000 population)

E 523		E 524		E 49, E 520, E 522 E 529		E 53		E 54		E 55		E 56	
Accidents Caused by Machinery and by Cutting and Piercing Instruments		Accidents Caused by Firearm Missile		All Other Accidents Including Late Effects		Drugs, Medicaments Causing Adverse Effects in Therapeutic Use		Suicide and Self-inflicted Injury		Homicide and Injury Purposely Inflicted by Other Persons		Other Violence	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NA	NA	NA	NA	NA	NA	NA	NA	2	0.8	—	—	—	—
NA	NA	NA	NA	NA	NA	NA	NA	1	0.8	—	—	—	—
NA	NA	NA	NA	NA	NA	NA	NA	1	0.9	—	—	—	—
..	..	..	..	..	..	..	..	7	..	4	..	..	..
..	..	..	..	37	..	..	..	4	..	2	..	..	..
..	..	..	..	25	..	..	..	3	..	2	..	..	..
886	0.7	11	0.0	5,635	4.6	49	0.0	22,795	18.7	916	0.8	2,732	2.2
812	1.4	11	0.0	3,826	6.4	30	0.1	14,290	23.8	507	0.8	1,843	3.1
74	0.1	—	—	1,809	2.9	19	0.0	8,505	13.7	409	0.7	889	1.4
5	—	6	—	92	—	2	—	274	—	40	—	26	—
—	—	—	—	33	—	2	—	37	—	4	—	3	—
—	—	—	—	20	—	4	—	54	—	3	—	4	—
—	—	—	—	—	—	—	—	180	0.3	129	0.2	—	—
—	—	—	—	—	—	—	—	119	0.4	115	0.4	—	—
—	—	—	—	—	—	—	—	61	0.2	14	0.0	—	—
—	—	—	—	88	3.3	1	0.0	368	13.9	50	1.9	131	4.9
—	—	—	—	76	5.6	—	—	222	16.5	32	2.4	103	7.6
—	—	—	—	12	0.9	1	0.1	146	11.2	18	1.4	28	2.2
41	0.1	58	0.1	10,248	13.1	4	0.0	3,440	6.3	5,480	10.0	57	0.1
32	0.1	50	0.2	7,553	20.2	3	0.0	2,132	7.8	4,712	17.3	42	0.2
9	0.0	6	0.0	2,695	6.0	1	0.0	1,308	4.8	768	2.8	15	0.1

6-1 Number of Cases of Infections

	Year	Sex	Cholera	Typhoid Fever and Paratyphoid Fever	Typhoid Fever	Paratyphoid Fever	Amoebiasis and Bacillary Dysentery	Amoebiasis
BRUNEI ⁽¹⁾	1988	T	0	1				
INDONESIA ⁽²⁾	1988	T	11,159	—	—	—	272	234
JAPAN ⁽³⁾⁽⁴⁾	1988	T M F	33 25 8	143 82 61	111 62 49	32 20 12	1,046 599 447	99 86 13
MALAYSIA ⁽⁵⁾		T	753	1,612	—	—	—	—
Peninsular Malaysia	1988	T	163	1,152	—	—	—	—
Sabah		T	494	127	—	—	—	—
Sarawak		T	96	333	—	—	—	—
PHILIPPINES ⁽⁶⁾	1987	T M F	— — —	15,290 9,159 6,131				— — —
SINGAPORE ⁽⁷⁾	1988	T M F	19 8 11	174 109 65	163 102 61	11 7 4		
THAILAND ⁽⁸⁾	1988	T	2,248	7,903	7,871	32	19,881	3,833

Source : (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, Indonesia 1989

(3) *Statistics of Communicable Diseases*, Japan 1988

(4) *Statistics of Food Poisoning*, Japan 1988

(5) Health Division, Ministry of Health

(6) *Philippine Health Statistics*, 1986, Health Intelligence Service,
Department of Health

(7) Ministry of Environment and Ministry of Health

(8) *Weekly Epidemiological Surveillance Record*, Division
of Epidemiology, Ministry of
Public Health

Note: a) No. of persons bitten

b) Viral hepatitis

Bacillary Dysentery	Food Poisoning (Bacterial)	Tuberculosis of all Forms	Leprosy	Diphtheria	Chickenpox	Infectious Hepatitis	Rabies	Malaria	Influenza (Grippe)
	40	126	4	0	1,350	21		21	
—	1,493	439,760	121,512	—	—	—	a) 10,269	120,132	—
947	34,016	54,357	33	9			—	55	17,859
513	17,778	..	..	4			—	48	..
434	16,238	..	..	5			—	7	..
774	1,643	8,004	228	103	—	1,549	—	50,721	—
515	1,444	4,796	116	96	—	1,169	—	12,432	—
134	161	2,104	53	6	—	210	—	37,272	—
125	38	1,104	59	1	—	170	—	1,017	—
—	—	163,740	1,766	1,443	6,336	16,084	319	121,097	495,161
—	—	86,782	1,058	823	3,897	10,310	215	65,392	230,307
—	—	76,958	708	620	2,439	5,774	104	55,705	264,854
	1,145	1,666	29	—	8,711	464 b)		228	
		1,123	19	—	5,909	352 b)		173	
		543	20	—	2,802	112 b)		55	
16,048	55,099	19,125	699	220	16,456	18,778	213	132,816	69,493

6-2 Number of Cases of Venereal Diseases

	Year	Sex	Syphilis & Sequelae	Congenital Syphilis	Early Syphilis, Symptomatic	Early Syphilis, Latent	Cardio- Vascular Syphilis	Syphilis of Central Nervous System	Late Syphilis, Latent	Other Forms Late Syphilis with Symptom	Other Syphilis & Not Specified	Gonococcal Infection	Other Venereal Diseases
BRUNEI ⁽¹⁾	1988	T	18									83	
INDONESIA ⁽²⁾	1988	T			4,695							20,247	
JAPAN ⁽³⁾	1988	T	2,530	26	1,359	349			259	324	213	5,931	42
		M	1,510	11	879	192			138	192	98	5,102	38
		F	1,020	15	480	157			121	132	115	829	4
MALAYSIA ⁽⁴⁾ Peninsular Malaysia Sabah Sarawak	1988	T	1,476									3,192	
		T	901									1,219	
		T	54									1,240	
		T	521									733	
PHILIPPINES ⁽⁵⁾	1987	T	62									11,361	
		M	27									1,966	
		F	35									9,395	
SINGAPORE ⁽⁶⁾	1988	T	906	10	397	250	2	4	200	—	43	4,985	2,387
		M	509	4	276	96	2	3	109	—	19	3,070	2,091
		F	397	6	121	154	—	1	91	—	24	1,715	296
THAILAND ⁽⁷⁾	1988	T			11,197							56,763	36,484

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, Indonesia, 1988

(3) *Statistics of Communicable Diseases, Japan, 1988*(4) *Communicable Disease Control*, Health Management and Information Unit, Health Division, Ministry of Health(5) *Philippine Health Statistics, 1987*, Health Intelligence Service, Department of Health

(6) Ministry of Health

(7) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology, Ministry of Public Health

7-1 Seasonal Distribution of Cholera Cases

	Year	Sex	Total	Month											
				Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
BRUNEI ⁽¹⁾	1988	T	—												
INDONESIA ⁽²⁾	1989	T	11,159	1,364	1,363	942	684	605	1,202	1,596	1,907	187	187	626	496
JAPAN ⁽³⁾	1988	T	33	4	2	5	2	—	2	5	7	3	2	1	—
		M	25	3	1	3	2	—	2	5	3	3	2	1	—
		F	8	1	1	2	—	—	—	—	4	—	—	—	—
MALAYSIA ⁽⁴⁾ Peninsular Malaysia Sabah Sarawak	1988	T	753												
		T	163												
		T	494												
		T	96												
PHILIPPINES ⁽⁵⁾	1987	T													
SINGAPORE ⁽⁶⁾	1988	T	19	2	3	2	—	4	2	—	5	1	—	—	—
THAILAND ⁽⁷⁾	1988	T	2,248	103	452	563	199	330	167	96	126	90	47	20	55

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, Indonesia, 1989

(3) *Statistics of Communicable Diseases, Japan*, 1988

(4) Health Division, Ministry of Health

(5) *Philippine Health Statistics, 1987*, Health Intelligence Service, Department of Health

(6) Ministry of the Environment

(7) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology, Ministry of Public Health

7-2 Seasonal Distribution of Typhoid Fever Cases

	Year	Sex	Total	Month											
				Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
BRUNEI ⁽¹⁾	1987		6	0	—	—	—	—	2	—	—	3	—	—	1
INDONESIA ^(2)a)	1986	T	24,807	2,299	1,661	1,757	2,206	2,128	2,271	2,631	2,296	2,097	2,221	2,004	1,196
JAPAN ⁽³⁾	1988	T	111	8	9	11	10	12	6	6	16	18	9	4	2
		M	62	8	5	4	7	7	3	4	6	9	4	3	2
		F	49	—	4	7	3	5	3	2	10	9	5	1	—
MALAYSIA ^(4)b) Peninsular Malaysia Sabah Sarawak	1988	T	1,612												
		T	1,152												
		T	127												
		T	333												
PHILIPPINES ^(5)c)	1987	T	15,290	1,093	1,052	1,165	1,050	1,366	1,207	935	1,365	1,206	1,780	1,504	1,567
SINGAPORE ⁽⁶⁾	1988	T	163	27	5	9	14	17	13	26	13	15	7	9	8
THAILAND ⁽⁷⁾	1987	T	11,240	573	494	562	649	892	1,582	1,748	1,247	1,132	1,129	835	397

Source: (1) Ministry of Health
 (2) Directorate General of CDC, Ministry of Health, Indonesia, 1987
 (3) *Statistics of Communicable Diseases, Japan*, 1988
 (4) Health Division, Ministry of Health
 (5) *Philippine Health Statistics*, Health Intelligence Service, Department of Health
 (6) Ministry of the Environment

(7) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology, Ministry of Public Health

Note: a) Including paratyphoid fever from sentinel areas
 b) Including paratyphoid fever
 c) Including paratyphoid fever and other salmonella infection

7-3 Seasonal Distribution of Paratyphoid Fever Cases

	Year	Sex	Total	Month											
				Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
BRUNEI (1)															
INDONESIA a)															
JAPAN (2)	1988	T	32	1	3	3	2	2	3	7	4	—	2	1	4
		M	20	—	2	3	2	—	3	5	2	—	1	1	1
		F	12	1	1	—	—	2	—	2	2	—	1	—	3
MALAYSIA a) Peninsular Malaysia Sabah Sarawak	1988														
PHILIPPINES a)	1984	T M F													
SINGAPORE (3)	1988	T	11	1	—	1	1	—	1	1	—	—	3	—	3
THAILAND (4)	1987	T	130	21	27	29	9	6	10	5	7	3	5	2	6

Source: (1) Ministry of Health

(2) *Statistics of Communicable Diseases, Japan, 1988*

(3) Ministry of the Environment

(4) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology,
Ministry of Public Health

Note: a) Included in typhoid fever (7-2)

7-4 Seasonal Distribution of Bacillary Dysentery Cases

	Year	Sex	Total	Month											
				Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
BRUNEI ⁽¹⁾	1987		10	0	0	1	0	4	3	0	0	0	1	1	0
INDONESIA ^{a)}	1988	T	38		21			6			11				
JAPAN ⁽²⁾	1988	T	947	84	44	103	79	43	190	63	116	81	60	32	52
		M	513	50	28	57	55	30	94	26	50	46	30	18	29
		F	434	34	16	46	24	13	96	37	66	35	30	14	23
MALAYSIA ^(3) b) Peninsular Malaysia Sabah Sarawak	1988	T	774												
		T	515												
		T	134												
		T	125												
PHILIPPINES	1987														
SINGAPORE															
THAILAND ⁽⁴⁾	1987	T	17,422	717	811	1,508	1,394	1,579	3,041	2,325	1,375	1,046	1,072	1,515	1,039

Source: (1) Ministry of Health

(2) *Statistics of Communicable Diseases, Japan*, 1988

(3) *Communicable Disease Control*, Health Management and Information Unit, Health Division, Ministry of Health

(4) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology, Ministry of Public Health

Note: a) Only three months

b) Number of cases of dysentery, all forms

7-5 Seasonal Distribution of Food poisoning Cases

	Year	Sex	Total	Month											
				Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
BRUNEI ⁽¹⁾	1987		19	5	3	1	0	3	0	2	0	0	2	1	2
INDONESIA ⁽²⁾	1988	T	1,493	101	312	6	19	2	9	85	67	227	102	497	16
JAPAN ⁽³⁾	1988	T	34,016	782	350	148	743	5,138	12,623	3,918	3,028	3,043	2,035	1,943	265
MALAYSIA ⁽⁴⁾ Peninsular Malaysia Sabah Sarawak	1988	T T T T	1,643 1,444 161 38												
PHILIPPINES	1987														
SINGAPORE ⁽⁵⁾	1988	T	1,145	18	218	74	14	13	102	34	38	78	55	177	324
THAILAND ⁽⁶⁾	1988	T	55,099	4,793	4,657	5,415	5,618	6,386	4,991	4,529	3,769	3,578	4,259	3,319	3,785

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, Indonesia, 1987

(3) *Statistics of Food Poisoning, Japan, 1988*

(4) Health Division, Ministry of Health

(5) Ministry of the Environment

(6) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology, Ministry of Public Health

8-1 Notifiable Infectious Diseases

ICD Number		(1)		(2)		(3)		Thailand 1988
		Brunei 1988	Indonesia 1988	Japan 1988	Malaysia 1988	Philippines 1987	Singapore 1988	
001	Cholera	V	V	V	V	V	V	V
002	Typhoid and Paratyphoid Fevers	V	V	V	V	V	V	V
003	Other Salmonella Infections	V			V	V		V
004	Shigella			V	V			V
008	Intestinal Infections due to Other Organisms	V		V a)				V
010-018	Tuberculosis	V		V	V	V	V	V
020	Plague	V	V	V	V		V	V
022	Anthrax			V				V
030	Leprosy	V		V	V	V	V	V
032	Diphtheria	V	V	V	V	V	V	V
033	Whooping Cough	V		V	V	V		V
034	Streptococcal Sore Throat and Scarlet Fever			V b)				V
036	Meningococcal Infection		V	V				V
037	Tetanus		V	V	V	V		V
045	Acute Poliomyelitis	V	V	V	V	V	V	V
052	Chickenpox	V				V	V	V
055	Measles	V		V	V	V	V	V
060	Yellow Fever		V	V	V		V	
061	Dengue		V c)		V	V	V c)	V
062	Mosquito-borne Viral Encephalitis	V		V	V		V	V
070	Viral Hepatitis	V			V	V	V	V
071	Rabies		V	V	V	V		V
072	Mumps	V						V
076	Trachoma							
081	Other Typhus	V			V			(Scrub Typhus) V
084	Malaria	V		V	V	V	V	V
087	Relapsing Fever		V	V				

Source: (1) Directorate General of CDC, Ministry of Health

(2) *Communicable Disease Control Information System Manual*, Ministry of Health

(3) *Philippine Health Statistics, 1987*

ICD Number	(1)		(2)				
	Brunei 1988	Indonesia 1988	Japan 1988	Malaysia 1988	Philippines 1987	Singapore 1988	Thailand 1988
090 Congenital Syphilis		V	V	V	V	V	V
098 Gonococcal Infections	V	V	V	V	V	V	V
099 Other Venereal Diseases	V	V d)	V d)	V e)		V f)	V f)
100 Leptospirosis	V						V
102 Yaws							
120 Schistosomiasis[Bilharziasis]		V	V		V		V
125 Filarial Infection and Dracontiasis		V	V g)	V	V g)		V
487 Influenza		V	V		V		V

Note: a) Infectious diarrhoea Only
b) Scarlet fever Only
c) Haemorrhagic fever Only
d) Chancroid + lymphogranuloma inguinale
e) Chancroid
f) All STDs
g) Only filariasis

9-1 Infectious Diseases Specified by Immunization Programme

	Brunei 1988	Indonesia 1988	Japan 1988	Malaysia 1988	Philippines 1985	Singapore 1988	Thailand 1988
Cholera					V		V
Diphtheria	V	V	V	V	V	V	V
Epidemic Typhus							
Measles	V	V	V	V	V	V	V a)
Mosquito-borne Viral Encephalitis			V				V
Mumps			V				
Plague							
Poliomyelitis	V	V	V	V	V	V	V
Rubella	V		V	V		V	V
Tetanus	V	V	V	V	V	V	V
Tuberculosis (BCG)	V		V	V	V	V	V
Typhoid and Paratyphoid Fever					V		V
Whooping Cough	V	V	V	V	V	V	V
Yellow Fever				V b)			

Note: a) In restricted areas

b) Required under Institute for Medical Research

10 Explanatory Notes for Vital Statistics

Crude Live-birth Rate = $(B/P) \times 1,000$

Crude Death Rate = $(D/P) \times 1,000$

where B = Number of live-births during a year

D = Number of deaths during a year

P = Population at middle of year

Crude Marriage Rate = $(M/P) \times 1,000$

Crude Divorce Rate = $(D/P) \times 1,000$

Crude Birth Rate = $(B/P) \times 1,000$

General Fertility Rate = $(B/F_{15-49}) \times 1,000$

where M = Number of marriages during a year

D = Number of divorces during a year

B = Number of births during a year

P = Population at middle of year

F_{15-49} = Population of women at ages 15–49 at middle of year

Absolute numbers and crude rates per 1,000 live-births

Late fetal deaths:	Fetal deaths after at least 28 weeks' gestation
	Fetal deaths of unknown gestational age are included
Infant deaths:	Deaths under one year
Neonatal deaths:	Deaths under four weeks
Post-neonatal deaths:	Deaths from four weeks to under one year
Perinatal deaths:	Late fetal deaths and deaths under one week

Maternal Mortality Rate is computed as the ratio of maternal deaths in a year to 100,000 live-births of the same year

Maternal Mortality Rate = $(D_p/B) \times 100,000$

where D_p = Direct obstetric deaths (Chapter XI in ICD-9)

B = Number of live-births during a year

10-1 Crude Live-birth Rates

(per 1,000 population)

Year	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI ⁽¹⁾			31.2	28.8	29.3	30.1	30.6	30.3	28.5
INDONESIA	43.8	a) 40.2	35.4	33.7	b) 33.2	b) 32.7	b) 32.2	b) 31.7	b) 31.3
JAPAN ⁽²⁾	18.8	17.1	13.6	12.7	12.5	11.9	11.4	11.1	10.8
MALAYSIA ⁽³⁾				30.9	31.3	31.9	31	29.5	30.0
Peninsular Malaysia	33.9	31.3	30.3	30.3	30.7	31.3	30.2	28.6	28.8
Sabah	37.9	35.4	38.7	40.7	42.7	42.3	42.7	40.9	42.1
Sarawak	30.4	29.7	29.4	28.6	27.5	28.6	27.7	28.1	30.0
PHILIPPINES ⁽⁴⁾	(5) 27.4	(5) 28.3	33.6	32.9	32.6	32.2	(5) 26.7		
SINGAPORE	22.1	17.8	17.3	16.2	16.4	(6) 16.6	(6) 14.8	(6) 16.7	(6) 20.0
THAILAND ⁽⁷⁾	31.5	27.4	22.8	21.3	19	18.8	18	16.5	16.0

Source : *Demographic Yearbook 1975, 1979, 1982*, UN
Population and Vital Statistics Report, 1980 1981, 1982, 1983, UN

- (1) Birth & Death Registry and Economic Planning Unit
 (2) *Vital Statistics Japan, 1970-88*, Ministry of Health & Welfare
 (3) *Yearbook of Statistics, Malaysia 1988*, Department of Statistics
 (4) National Statistics Office
 (5) *Philippine Health Statistics 1970, 1975, 1986*, Health Intelligence Service, Department of Health

(6) *Monthly Digest of Statistics, July 1989*, Department of Statistics

(7) Health Statistics Division, Ministry of Public Health

Note: a) Estimates for 1970-75 prepared by the Population Division, UN
 b) Calculated by Central Bureau of Statistics in 1985, based on National Census 1980

10-2 Crude Death Rates

(per 1,000 population)

Year	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI ⁽¹⁾			4.0	3.5	3.6	3.6	3.2	3.3	3.2
INDONESIA ⁽²⁾	18.7	16.7	12.5	11.7	11.3	11.18	10.87	10.56	10.26
JAPAN ⁽³⁾	6.9	6.3	6.2	6.2	6.2	6.3	6.2	6.2	6.5
MALAYSIA ⁽⁴⁾			5.3	5.1	5.1	5.0	4.8	4.7	4.7
Peninsular Malaysia	7.3	6.4	5.5	5.3	5.3	5.3	5	4.9	4.9
Sabah	5.9	4.3	4.2	4.5	4.3	4.1	4.1	4.0	3.9
Sarawak	5.2	5	4.2	3.9	3.9	3.7	3.5	3.1	3.3
PHILIPPINES ⁽⁵⁾	⁽⁶⁾ 6.7	⁽⁶⁾ 6.4	8.7	8.3	8.1	7.9	5.8		
SINGAPORE	5.2	5.1	5.2	5.3	⁽⁷⁾ 5.2	⁽⁷⁾ 5.2	⁽⁷⁾ 5.0	⁽⁷⁾ 5.0	⁽⁷⁾ 5.2
THAILAND ⁽⁸⁾	6.2	5.8	5.3	5.1	4.5	4.4	4.1	4.3	4.2

Source : *Demographic Yearbook 1975, 1979, 1982, UN**Population and Vital Statistics Report, 1980 1981, 1982, 1983, UN*

(1) Birth & Death Registry and Economic Planning Unit

(2) Calculated by Central Bureau of Statistics in 1985, Based on National Census 1980.

(3) *Vital Statistics Japan, 1970-88*, Ministry of Health & Welfare(4) *Yearbook of Statistics, Malaysia 1988*, Department of Statistics

(5) National Statistics Office

(6) *Philippine Health Statistics 1970, 1975, 1986*, Health Intelligence Service, Department of Health(7) *Monthly Digest of Statistics, 1989*, Department of Statistics, Singapore

(8) Health Statistics Division, Ministry of Public Health

10-3 Vital Statistics Rates

(per 1,000 population)

	Year	Crude Marriage Rate	Crude Divorce Rate	Crude Birth Rate	General Fertility Rate	Crude Death Rate	Infant Mortality Rate
BRUNEI ⁽¹⁾	1988	7.4	0.8		108.1	3.2	7.0
INDONESIA ⁽²⁾	1988	6.74	0.88	31.26	NA	10.26	66.24
JAPAN ⁽³⁾	1988	5.8	1.26	10.8	43.4	6.5	4.8
MALAYSIA ⁽⁴⁾		NA	NA	29.5	a)		
Peninsular Malaysia	1987	NA	b)	28.7	115.9	4.6	14.56
Sabah		NA	2.7	38.7	111.7	4.8	14.36
Sarawak		NA	b)	28.3	173.4	3.9	20.80
			2.2		110.9	3.2	9.09
			2.3				
PHILIPPINES ⁽⁵⁾	1987		NA	27.6	110.9	5.8	32.1
SINGAPORE ⁽⁶⁾	1988	9.4	1.1	20.0	67.3	5.2	7.0
THAILAND ⁽⁷⁾	1988	(8) 7.12	(8) 0.61	16.0	60.53	4.2	9.3

Source : (1) Birth & Death Registry and Economic Planning Unit
 (2) Calculated by Central Bureau of Statistics, based on national census 1980
 (3) *Vital Statistics Japan, 1988*, Ministry of Health & Welfare
 (4) *Yearbook of Statistics, Malaysia 1988*, Department of Statistics
 (5) *Philippine Health Statistics 1987*, Department of Health
 (6) *Yearbook of Statistics, Singapore, 1986*, Department of Statistics
 (7) Health Statistics Division, Ministry of Public Health

(8) Ministry of Interior, 1984

Note: a) Rate computed based on population & Birth data from the vital statistics, Malaysia 1986
 b) For 1980 : *Social Statistical Bulletin*, Malaysia 1981

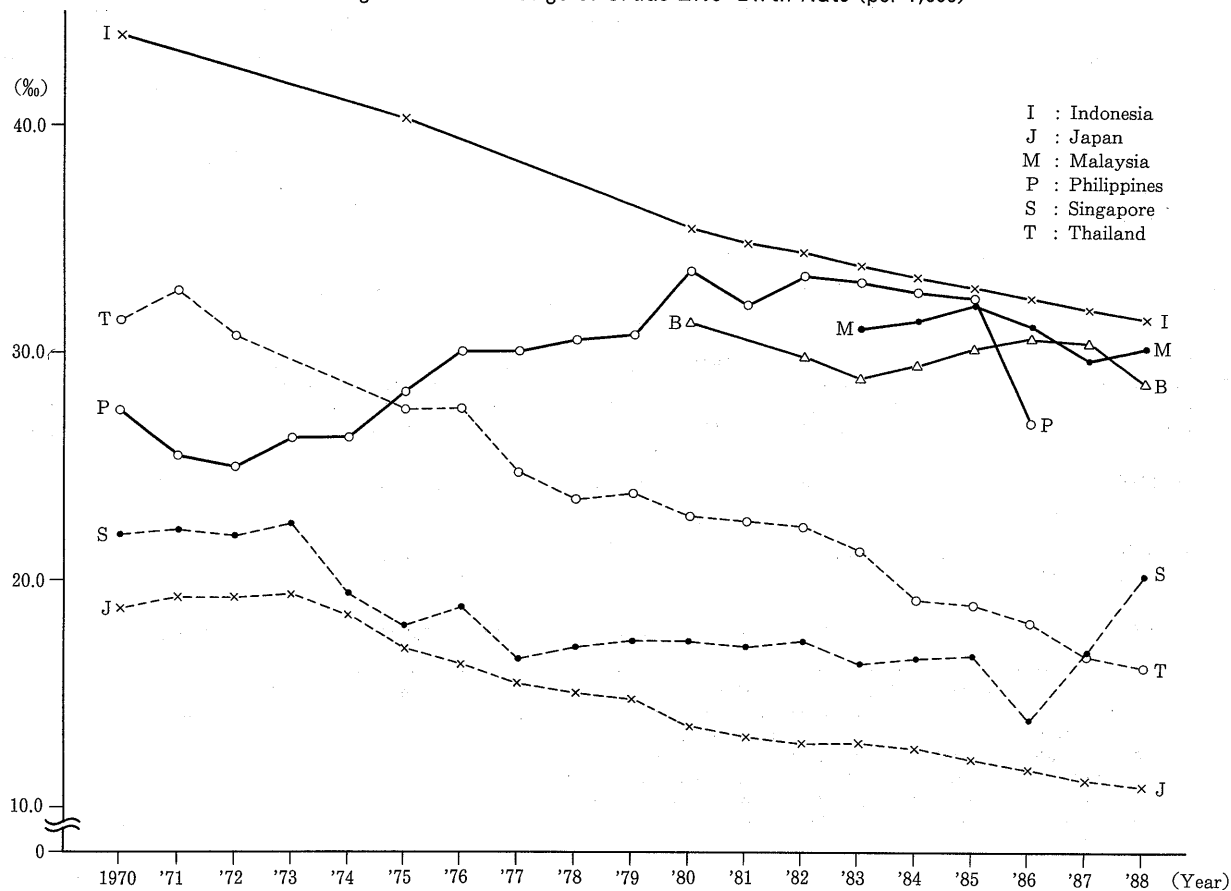
10-4 Natality, Mortality and Natural Increase

	Year	Natality (live-born)				General Mortality				Natural Increase (%)
		Number			(‰)	Number			(‰)	
		Total	Male	Female		Total	Male	Female		
⁽¹⁾ BRUNEI	1988	6,884								25.3
⁽²⁾ INDONESIA	1988									21.0
⁽³⁾ JAPAN	1988	1,314,006	674,909	639,097	10.8	793,045	428,144	364,901	6.5	4.3
⁽⁴⁾ MALAYSIA	1987	486,871	251,679	235,192	29.5	75,461	43,080	32,381	4.6	24.9
Peninsular Malaysia		391,815	201,521	190,294	28.7	65,282	36,795	28,487	4.8	23.9
Sabah		51,057	26,705	24,352	38.7	5,181	3,189	1,992	3.9	34.8
Sarawak		43,999	23,453	20,546	28.3	4,998	3,096	1,902	3.2	25.1
⁽⁵⁾ PHILIPPINES	1987	1,582,469	825,528	756,941	27.6	335,254	197,275	137,979	5.8	2.8
⁽⁶⁾ SINGAPORE	1988	52,822	27,298	25,523	20.0	13,690	7,585	6,104	5.2	14.8
⁽⁷⁾ THAILAND	1988	870,512	445,970	424,542	16.0	231,227	133,721	97,506	4.2	11.8

Source : (1) Birth & Death Registry and Economic Planning Unit
(2) Calculated by Central Bureau of Statistics in 1985, based on National Census 1980
(3) *Vital Statistics Japan, 1988*, Ministry of Health & Welfare
(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak 1987*.
(5) *Philippine Health Statistics 1986*, Health Intelligence Service, Department of Health
(6) *Monthly Digest of Statistics, July, 1989*, Department of Statistics
(7) Health Statistics Division, Ministry of Public Health

Note: Figures for males and females may not add up to the total on account of unknown sex

Fig.3 Annual Change of Crude Live-Birth Rate (per 1,000)



11-1 Late Fetal, Infant, Neonatal, Post-neonatal and Perinatal Mortality

	Year	Late Fetal Mortality		Infant Mortality		Neonatal Mortality		Post-neonatal Mortality		Perinatal Mortality	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI ⁽¹⁾	1988	48	7.0	4.8	7.0	26	3.8	21	3.0	70	10.2
INDONESIA ⁽²⁾	1988				a) 66.2						
JAPAN ⁽³⁾	1988	5,765	4.4	6,268	4.8	3,593	2.7	2,749	2.1	8,514	6.5
MALAYSIA ⁽⁴⁾	1987										
Peninsular Malaysia		3,702	9.4	5,625	14.36	3,563	9.09	2,062	5.26	6,522	16.49
Sabah		145	2.8	1,062	20.80	725	14.20	337	6.60	786	15.40
Sarawak		194	4.4	400	9.10	289	6.60	111	2.51	419	9.50
PHILIPPINES ⁽⁵⁾	1987	4,313	2.7	50,803	32.1	21,381	13.5	29,422	18.6	20,449	12.9
SINGAPORE ⁽⁶⁾	1988	203	3.8	368	7.0	245	4.6	123	2.3	389	7.4
THAILAND ^(7) b)	1988			8,113	9.3	3,317	3.8	4,796	5.5	c) 2,718	3.1

Source : (1) Birth & Death Registry and Economic Planning Unit

(2) Ministry of Health, Indonesia 1987

(3) *Vital Statistics Japan, 1988*, Ministry of Health & Welfare

(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak 1987*, Department of Statistics

(5) *Philippine Health Statistics 1987*, Health Intelligence Service, Department of Health

(6) *Singapore Demographic Bulletin, July 1989*, Registry of Birth and Death, National Registration Department

(7) Health Statistics Division, Ministry of Public Health

Note : a) Central Bureau of Statistics, Demographic Parameter Approximate and family planning User in Indonesia, 1985-1995

b) While the vital registration system of the whole country was revised for improvement in 1984, the registration of stillbirth has no longer been emphasized since then. The stillbirth data are therefore incomplete and not valid enough to be presented in the vital statistics.

c) As mentioned in Note b) above, the data on stillbirths are incomplete. The figures on late fetal deaths included here are those collected from hospital only.

11-2 Infant Mortality by Age and Sex

	Year	Sex	Number						Rate (per 1,000 live-births)					
			Total	1 day	2-6	7-27	28-365	Unknown	Total	1 day	2-6	7-27	28-365	Unknown
BRUNEI ⁽¹⁾	1988	T	48	22		4	22	—	7.0	3.2		0.6	3.2	—
INDONESIA ⁽²⁾	1988	T							66.2					
JAPAN ⁽³⁾	1988	T	6,265	2,011	738	843	2,673	—	4.8	1.5	0.6	0.6	2.0	—
		M	3,434	1,081	409	453	1,491	—	5.1	1.6	0.6	0.7	2.2	—
		F	2,831	930	329	390	1,182	—	4.4	1.5	0.5	0.6	1.8	—
MALAYSIA ⁽⁴⁾	1987	T	5,625						14.36					
Peninsular Malaysia		M	3,151						15.64					
		F	2,474						13.00					
		T	1,062						20.80					
Sabah		M	598						22.40					
		F	464						19.10					
		T	400						9.10					
Sarawak		M	235						10.0					
		F	165						8.0					
PHILIPPINES ⁽⁵⁾	1987	T	50,803	16,136		5,245	29,442	0	32.1	10.2		3.3	18.6	0
SINGAPORE ⁽⁶⁾	1987	T	224	134	57	55	78	—	7.4	3.1	1.3	1.2	1.8	—
		M	191	74	34	37	46	—	8.5	3.3	1.5	1.7	2.0	—
		F	130	57	23	18	32	—	6.2	2.7	1.1	0.9	1.5	—
THAILAND ⁽⁷⁾	1988	T	8,113	1,226	983	1,108	4,564	232	9.3	1.4	1.1	1.3	5.2	—
		M	4,658	682	589	652	2,595	140	10.4	1.5	1.3	1.5	5.8	—
		F	3,455	544	394	456	1,969	92	8.1	1.3	0.9	1.1	4.6	—

Source : (1) Birth & Death Registry and Economic Planning Unit

(2) Calculated by Central Bureau of Statistics, based on National Census 1980

(3) *Vital Statistics Japan, 1988*, Ministry of Health & Welfare

(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak 1987*, Department of Statistics, Malaysia

(5) Health Intelligence Service, Department of Health

(6) *Report on Registration of Births and Deaths, Singapore 1987*

(7) Health Statistics Division, Ministry of Public Health

11-3 Maternal Mortality Rates

(per 100,000 live-births)

	1970	1975	1980	1983	1984	1985	1986	1987	1988
(1) BRUNEI			70	70	50	—	—	10	—
INDONESIA									
(2) JAPAN	50.0	28.7	20.5	15.4	15.3	15.8	13.5	12.0	9.6
(3) a) MALAYSIA									
Peninsular Malaysia	148	83	63	40	39	37	30	28	
Sabah	11	72	107	17	20	19	10	14	
Sarawak	90	20	50	20	30	10	12	1	
(4) PHILIPPINES	(5) 190	(5) 140	110	100	90	90	(5) 105.3	110	
(6) b) SINGAPORE	32.7	30.0	4.9	14.8	12.0	4.7	13.0	6.9	7.6
(7) THAILAND	226.1	171.7	98.5	63.5	48	42	34.7	37.2	27.2

Source : *Demographic Yearbook 1982*, UN

Note: a) Medically certified or inspected deaths only

- (1) Birth & Death Registry and Economic Planning Unit
- (2) *Vital Statistics Japan, 1970-87*, Ministry of Health & Welfare
- (3) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak (Respective years)*
- (4) Projections by Department of Health
- (5) *Philippine Health Statistics 1986*, Intelligence Service, Department of Health
- (6) *Report on the Registration of Births and Deaths*
- (7) Health Statistics Division, Ministry of Public Health

12-1 Expectation of Life at Specified Ages for Each Sex

	Year	Sex	Age								
			0	1	2	3	4	5	10	15	20
(1) BRUNEI	1981	M	70.1	70.3				66.7	61.9	57.1	52.4
		F	72.7	72.7				69.0	64.1	59.3	54.5
(2) INDONESIA	1986	M	58.84	64.54				60.29	55.86	51.26	46.85
		F	62.50	65.48				63.17	58.72	54.11	49.64
(3) JAPAN	1988	M	75.54	74.92	73.98	73.02	72.05	71.07	66.15	61.21	56.40
		F	81.30	80.66	79.71	78.75	77.77	76.79	71.84	66.89	61.96
(4) MALAYSIA Peninsular Malaysia Sabah Sarawak	1987	M	68.2	68.3				64.8	59.9	55.0	50.4
		F	72.6	72.6				69.0	64.2	59.3	54.4
(5) PHILIPPINES	1986	M	61.6	64.6	64.2	63.5	62.7	61.9	57.4	52.7	48.2
		F	65.2	67.6	67.2	66.4	65.6	64.8	60.2	55.5	51.0
(6) SINGAPORE	1988 ^{a)}	M	71.7	71.3				67.4	62.5	57.6	52.8
		F	76.3	75.8				71.9	67.0	62.1	57.2
(7) THAILAND	1985 — 1990	M	61.75	64.70				61.98	57.43	52.76	48.26
		F	67.50	69.32				66.23	61.55	56.79	52.13

Source : (1) *Brunei Statistical Yearbook 1986*

Note: a) Preliminary

(2) Calculated by Centre for Health Data, using model life table for developing countries, UN, 1982

(3) *Abridged Life Table for Japan 1988*, Ministry of Health & Welfare, Japan(4) *Abridged Life Table 1986*, Department of Statistics, Malaysia

(5) National Statistics Office, calculated by Interpolation using west model life table

(6) *Abridged Life Table 1988*, Ministry of Health

(7) National Statistical Office

Age														
25	30	35	40	45	50	55	60	65	70	75	80	85	90	95+
47.8 49.7	43.2 44.9	38.5 40.1	33.9 35.4	29.4 31.0	25.1 26.6	21.1 22.7	17.3 19.2	13.7 16.1	10.6 12.9	7.6 10.0	5.7 7.2	4.2 5.2		
42.61 45.30	38.35 40.90	34.10 36.71	29.90 32.47	25.83 28.29	21.93 24.20	18.27 20.28	14.89 16.56	11.84 13.15	9.15 10.10	6.83 7.50	4.87 5.32			
51.62 57.06	46.81 52.16	41.99 47.28	37.24 42.44	32.59 37.67	28.08 32.97	23.79 28.37	19.78 23.88	15.95 19.54	12.39 15.42	9.26 11.62	6.69 8.36	4.75 5.77	3.31 3.82	2.28 2.44
45.8 49.6	41.2 44.9	36.6 40.1	32.0 35.4	27.6 30.8	23.3 26.3	19.4 22.1	15.8 18.0	12.7 14.5	9.8 11.2	7.9 8.6	5.4 6.1			
43.8 46.5	39.4 42.1	35.1 37.7	30.8 33.3	26.6 29.0	22.5 24.8	18.8 20.8	15.3 17.0	12.2 13.5	9.4 10.4	7.0 7.7	5.0 5.5			
48.1 52.3	43.3 47.4	38.5 42.6	33.8 37.8	29.2 33.1	24.8 28.5	20.7 24.2	17.1 20.2	13.8 16.2	10.8 12.7	8.3 9.6	6.0 7.0	4.2 4.5		
43.90 47.56	39.50 43.03	35.12 38.52	30.80 34.07	26.59 29.60	22.58 25.34	18.80 21.26	15.32 17.37	12.19 13.79	9.41 10.66	7.04 7.93	5.04 5.70			

12-2 Survivors at Specified Ages for Each Sex

	Year	Sex	Age							
			0	1	5	10	15	20	25	30
(1) BRUNEI	1981	M F	100,000 100,000	98,320 98,704	97,810 98,272	97,436 98,091	97,126 97,809	96,553 97,437	95,797 97,059	95,087 96,667
(2) INDONESIA	1986	M F	100,000 100,000	92,570 93,996	90,001 91,571	89,112 90,762	88,447 90,136	87,391 89,211	85,917 87,988	84,379 86,585
(3) JAPAN	1988	M F	100,000 100,000	99,492 99,558	99,288 99,396	99,177 99,325	99,087 99,266	98,760 99,146	98,361 98,992	97,985 98,801
(4) MALAYSIA Peninsular Malaysia Sabah Sarawak	1986	M F	100,000 100,000	98,282 98,637	97,790 98,182	97,472 97,923	97,175 97,707	96,599 97,420	95,783 97,065	94,881 96,630
(5) PHILIPPINES	1986	M F	100,000 100,000	93,882 95,083	92,002 93,325	91,285 92,698	90,741 92,212	89,842 91,471	88,588 90,475	87,293 89,316
(6) a) SINGAPORE	1988	M F	100,000 100,000	99,219 99,343	99,039 99,180	98,911 99,061	98,751 98,939	98,445 98,767	97,934 98,548	97,440 98,256
(7) THAILAND	1985 - 1986	M F	100,000 100,000	94,797 95,234	93,971 95,242	93,358 94,639	93,336 94,129	92,336 93,421	91,454 92,672	89,926 91,892

Source : (1) *Brunei Statistical Yearbook 1986*

Note: a) Preliminary

(2) Calculated by Centre for Health Data, using model life table for developing countries

(3) *Abridged Life Table 1988*, Ministry of Health & Welfare

(4) *Abridged Life Table 1986*, Department of Statistics, Malaysia

(5) Calculated by Interpolation using west model life table, National Statistics Office

(6) *Abridged Life Table 1988*, Ministry of Health

(7) The survey of population change 1985-1986

Age												
35	40	45	50	55	60	65	70	75	80	85	90	95+
94,297 96,065	93,386 95,306	91,805 93,927	89,627 91,624	85,842 87,809	80,563 81,701	73,601 73,207	62,993 64,942	50,187 53,999	31,312 41,422	14,851 25,421		
82,663 84,988	80,602 83,137	77,956 80,939	74,440 78,183	69,636 74,460	63,159 69,465	54,542 62,405	43,755 52,768	31,158 40,095	18,314 25,602			
97,573 98,561	96,964 98,205	95,986 97,656	94,441 96,816	91,862 95,541	87,782 93,692	82,152 90,894	74,142 86,377	62,193 78,893	45,506 66,023	26,345 46,489	10,629 24,098	2,454 7,242
93,954 96,067	92,793 95,286	91,025 94,103	88,416 92,436	84,069 89,670	77,564 85,390	68,039 78,235	56,105 68,306	40,472 53,705	26,442 38,015			
85,846 87,981	84,084 86,339	81,758 84,457	78,537 81,925	73,998 78,436	67,661 73,646	59,044 66,771	47,978 57,104	34,726 44,057	20,861 28,685			
96,879 97,895	96,032 97,333	94,825 96,610	92,823 95,296	89,162 92,981	83,028 89,448	74,369 83,880	63,023 75,590	48,563 63,384	32,955 47,863	17,103 30,551		
88,353 91,042	86,634 90,001	84,503 85,466	81,433 86,597	77,294 83,438	71,174 77,737	61,635 70,765	50,750 61,589	36,496 49,615	23,648 39,094			

Fig.4 Survivors at specified Ages for Each Sex (1)
BURUNEI, 1981

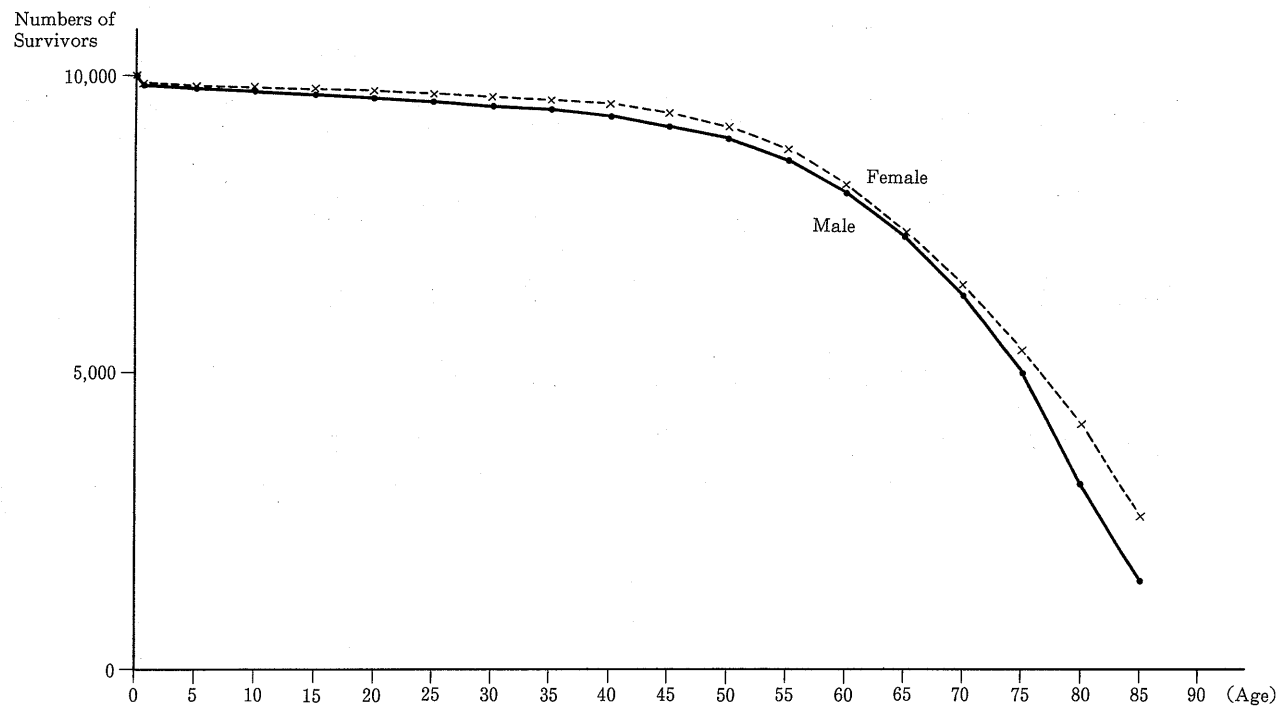


Fig.4 Survivors at specified Ages for Each Sex (2)
INDONESIA, 1986

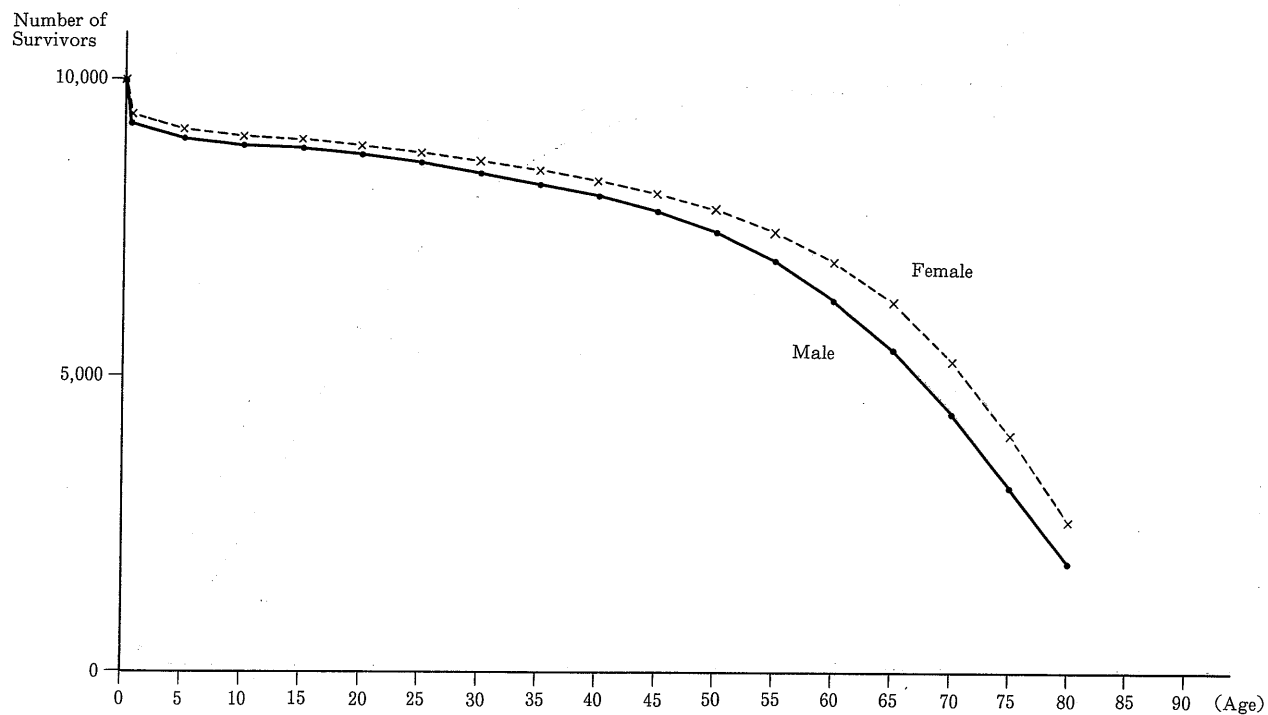


Fig.4 Survivors at specified Ages for Each Sex (3)
JAPAN, 1988

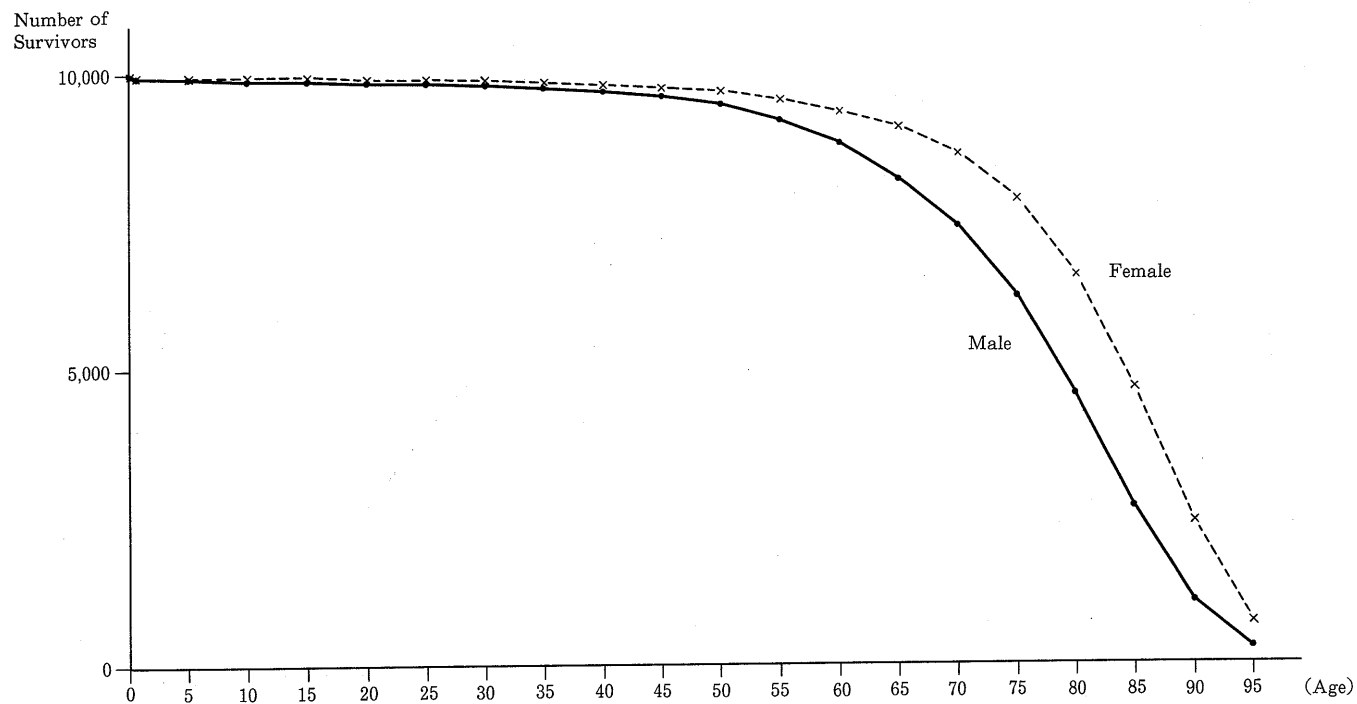


Fig.4 Survivors at specified Ages for Each Sex (4)
PENINSULAR MALAYSIA, 1986

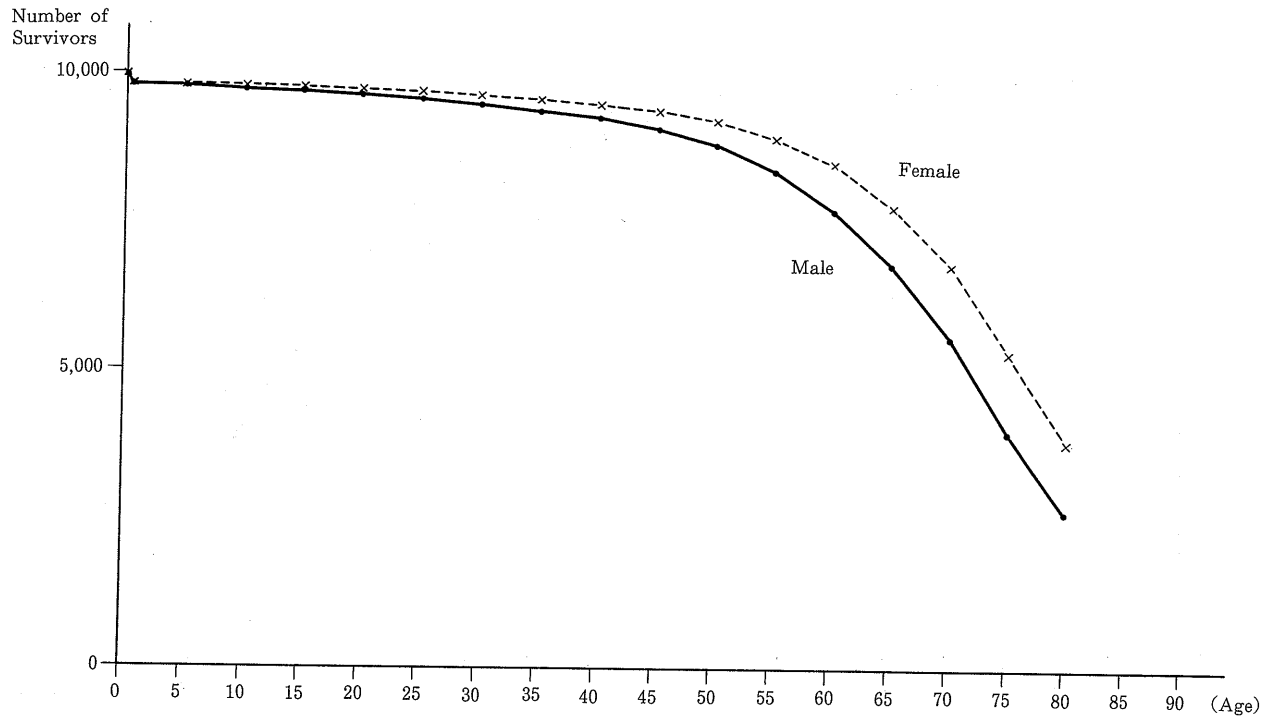


Fig.4 Survivors at specified Ages for Each Sex (5)
PHILIPPINES, 1986

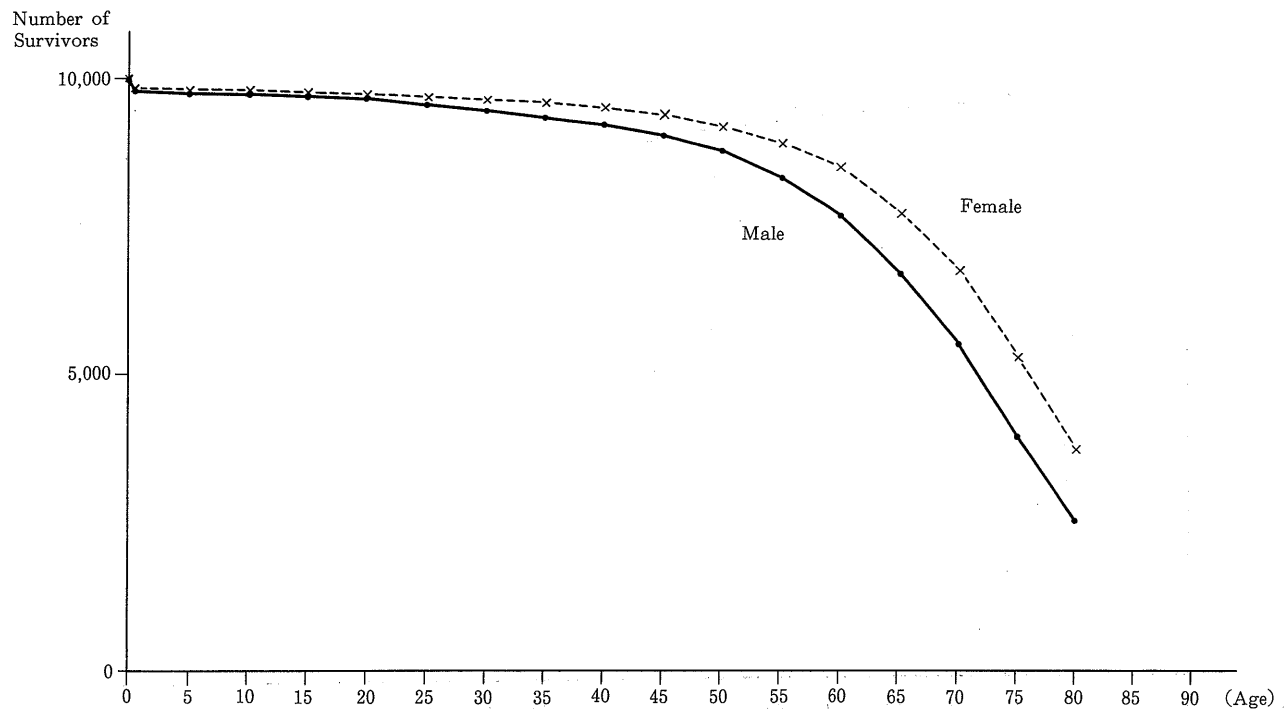


Fig.4 Survivors at specified Ages for Each Sex (6)
SINGAPORE, 1988

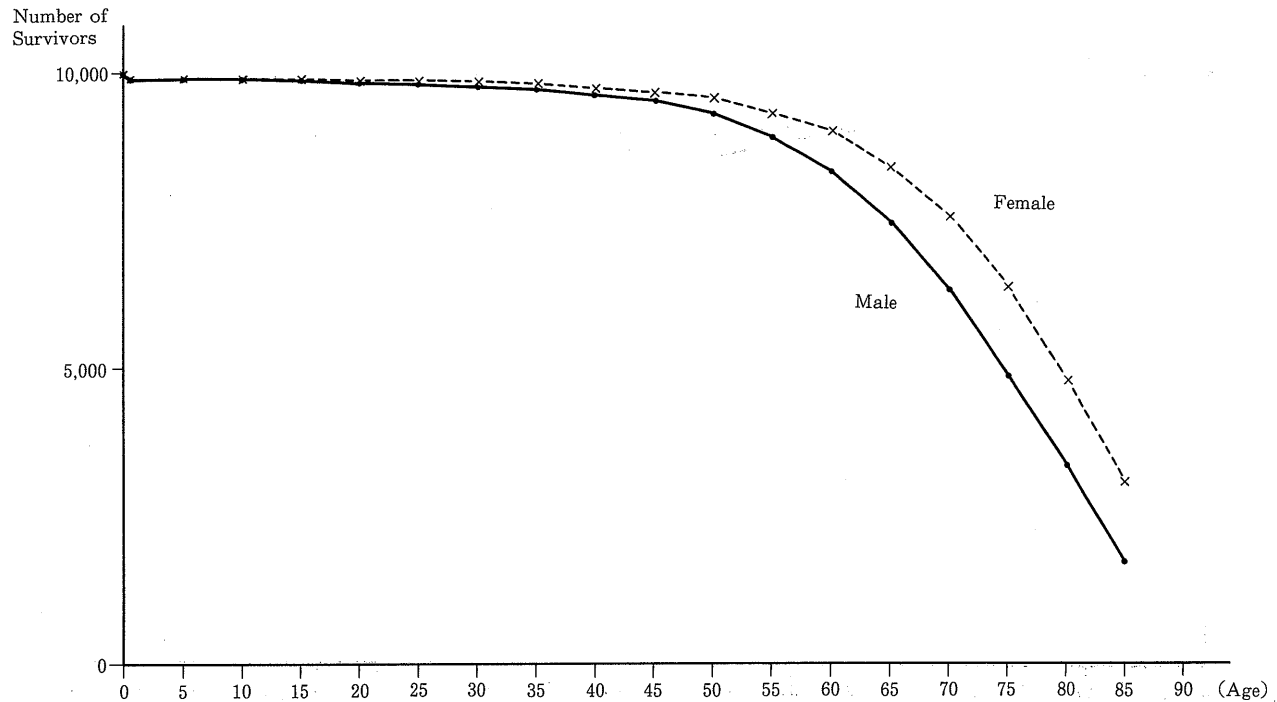


Fig.4 Survivors at specified Ages for Each Sex (7)
THAILAND, 1985-1986

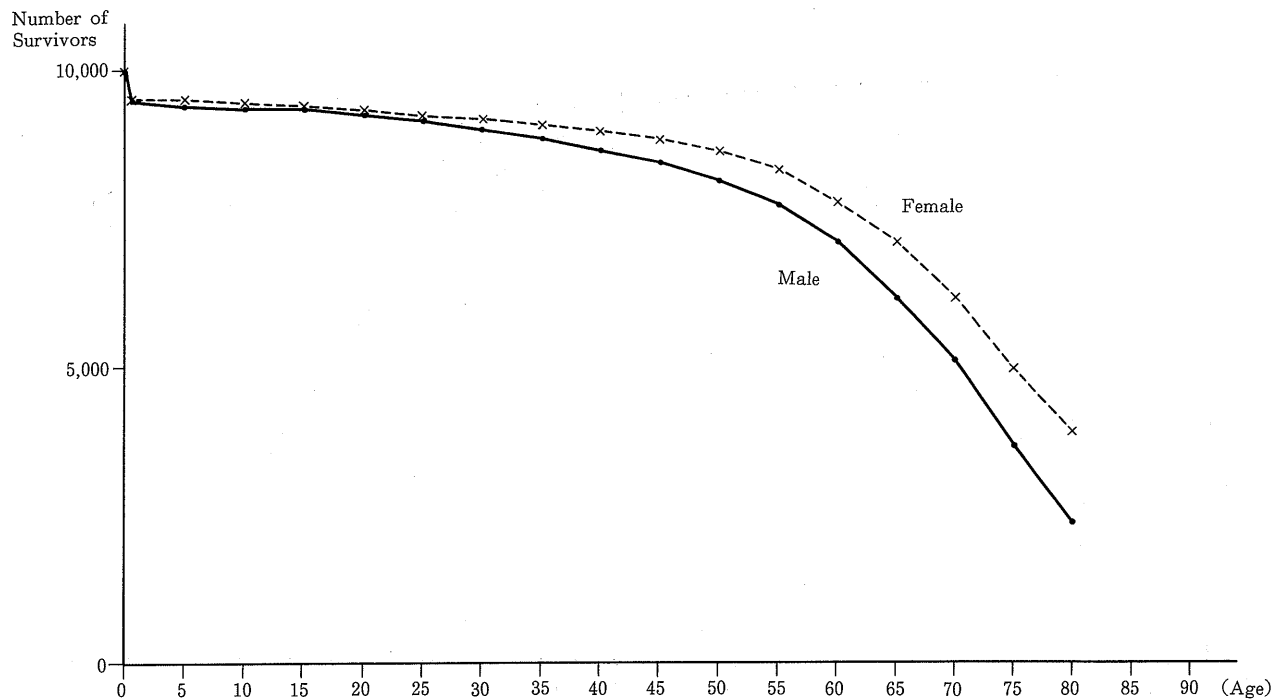
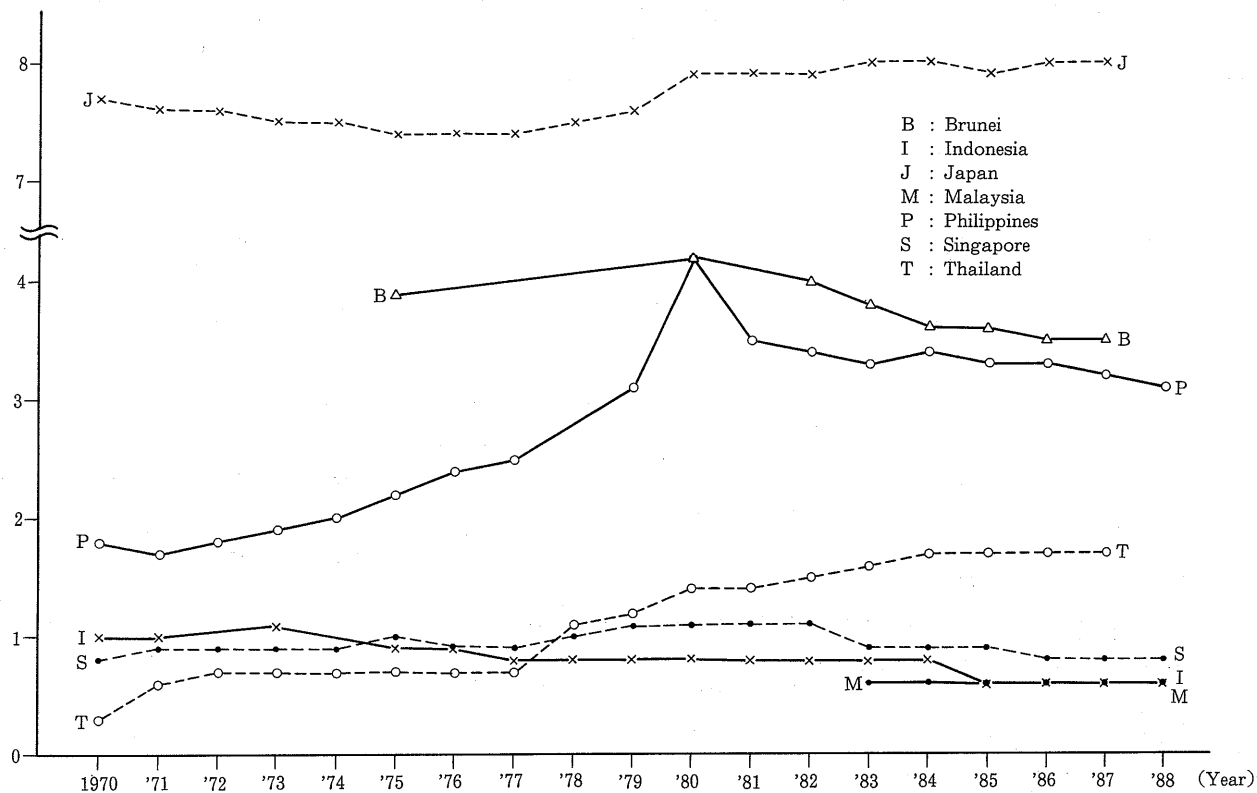


Fig.5 Annual Change of Number of Hospitals (per 100,000 population)



13-1 Per Capita Food Intake (1)

	Year	Energy (kcal/day)			Protein (g/day)			Fat (g/day)		
		Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products
BRUNEI										
(1) INDONESIA	1986	2,660	2,597	63	58.2	51.8	6.4	—	—	—
(2) JAPAN	1987	2,053			78.5	38.4	40.1	56.6	29.0	27.6
MALAYSIA	1977	a) 2,549	a) 2,195	a) 354	57.6	35.7	21.9	45.5	29.2	16.3
(3) PHILIPPINES	1987	1,753	1,541	212	49.7	31.1	18.6	30	19	11
(4) SINGAPORE	1983	2,922	2,266	657	71.8	39.0	32.8	70.1	21.6	48.5
(5) THAILAND	1986	1,766	1,412	354	50.8	27.9	22.9	42.6	13.4	29.2

Source : *Food Balance Sheets 1975-77, Average and Per Capita Food Supplies 1961-65, Average 1967 to 1977*, FAO, 1980

Note: a) For 1982

(1) *Welfare Indonesia 1987*, Central Bureau of Statistics

(2) *Japan Statistical Yearbook 1989*, Statistical Bureau, Management & Coordination Agency

(3) Actual Food Consumption Survey (Food weighing Technique), Food and Nutrition Research Institute

(4) *Food Supplies Analyses*, FAO, Rome 1984

(5) Nutrition Division, Ministry of Public Health

13-1 Per Capita Food Intake (2)

	Year	Calcium (mg/day)	Iron (mg/day)	Vitamin A (mg/day)	Vitamin B ₁ (mg/day)	Vitamin B ₂ (mg/day)	Vitamin C (mg/day)	Carbohydrate (g/day)
BRUNEI								
INDONESIA	1983	215	10.0	a) 1,096	1.18	—	142	
JAPAN	1987	551	10.5	a) 2,119	1.34	1.25	122	291
MALAYSIA	1977	330	13.5	135	0.87	0.79	44	
PHILIPPINES	1987	420	10.7	310.1	0.68	0.56	53.6	313
SINGAPORE	1977	656	21.8	269	1.59	1.38	76	
THAILAND	1977	243	13.9	73	0.87	0.64	60	293.7

Note: a) Unit = i.u.

14-1 Socio-Economic Indicators

	Year	Literacy Rates (%)	Per Capita GNP ^{a)} (in US \$)	Labour Force Participation Rate (%)
BRUNEI	1986	b) 87	c) 12,423	d) 60.3
INDONESIA	1987	(1) e) 80.91	(1) 409	57.4
JAPAN	1988	f) 99.99	23,290	(2) 62.6
MALAYSIA	1988	g) Male : 80 g) Female : 64	1,961	66.1
PHILIPPINES	1989	NA	c) 665	Jan. 63.8 Apr. 65.2
SINGAPORE	1988	h) 87.2	7,950	i) 62.9
(3) THAILAND	1984	j) 87.7	c) 893	c) 74.4

Source : (1) *Statistical Year Book of Indonesia, 1988*, Central Bureau of Statistics

(2) *Japan Statistical Yearbook 1989*

(3) Office of the National Economic and Social Development Board

Note: a) Figures for each country converted into US \$ by SEAMIC, using yearly average exchange rates shown in IMF International Financial Statistics.

b) Age 9 years and over

c) For 1988

d) Age 15 years and over

e) For 1985

f) Children not enrolled

g) For 1980

h) Per 100 population aged 10 years and over

i) Per 100 population aged 15 years and over

j) 7 years old

15-1 Family Planning Methods Used

(%)

	Year	Reversible				Irreversible	a) Natural	b) Others
		Oral Contraceptive	IUD	Injection	Condom	Sterilization (Tubal ligation, Vasectomy)		
BRUNEI								
INDONESIA								
JAPAN ⁽¹⁾	1988	7.0		—	76.8	7.4	16.3	6.0
MALAYSIA	1987	74.0	4.9	2.2	11.4	5.7	—	1.8
PHILIPPINES	1988	14.6	5.5	—	3.0	25.0	1.3	50.6
SINGAPORE	1987	11.1	6.7	0.4	31.6	c) 32.7	16.2	1.3
THAILAND ^(2) d)	1988	17.2	5.7	9.4	—	30.7	—	—

Source : (1) Institute of Population Problems

(2) Department of Health, Ministry of Public Health

Note: a) Basic body temperature, cervical mucous, rhythm Method

b) Diaphragm, etc.

c) % of all those practising contraception

d) Married women of reproductive age (15~44 years)

16-1 Housing Conditions

(%)

	Year		Percentage of Households in Occupied Dwelling Units with Piped Water	Percentage of Households in Occupied Dwelling Units by Type of Toilet Facilities				Lighting			
				Flush/ Water	Pit or Moulded Bucket	Other	None	Electricity	Pressure/ Gas Lamp	Oil Lamp	Other
BRUNEI	1981	Total	90.1	54.6	2.8	38.6	4.1	85.7	2.7	10.9	0.7
(1) INDONESIA	1985	Total	(2)	(2)	(2)						
		Urban	10.8	14.9	19.7	65.3	—	30.5	—	68.8	0.8
		Rural	32.4	38.4	17	44.6	—	72.8	—	26.9	0.2
(3) JAPAN	1983	Total	94	58.5	41.5						
		Urban	95.9	67	33						
(4) MALAYSIA Peninsular Malaysia Sabah Sarawak	1980	Total	65	56.4	22.7	4.4	16.5	64.4	8.4	26.5	0.7
		Total	68	60.7	21.7	3.6	14.7	68.4	7.3	23.6	0.7
		Total	50.3	32.1	32.9	8.1	26.9	45	15.7	28.7	0.6
		Total	47.8	56.4	22.7	4.4	16.5	41.6	13.2	44.5	0.7
(5) PHILIPPINES	1987	Total	71.4	67.9	16.0	3.7	16.1	57.0			
		Urban	85.1	79.4	10.3	1.4	10.3	85.4			
		Rural	60.6	58.8	70.6	2.2	20.7	39.7			
(6) SINGAPORE	1988	Total	99	96.5		3.5		95		5	
(7) THAILAND	1980	Total	18.9	4.2	50.3	44.1	1.3	43	0.7	54.8	0.2

Source : (1) *Welfare Indicators 1986*, Central Bureau of Statistics

(2) 1985 Inter - Censal Population Survey

(3) *1983 Housing Survey of Japan, Vol. 1, Part 1*, Statistics Bureau, March 1985(4) *Census of Housing, Malaysia 1980 Summary Report*, Department of Statistics Malaysia, July 1982

(5) Family Income & Expenditure Survey, 1985, National Statistics Office

(6) Public Utilities Board and Ministry of the Environment

(7) *1980 Population & Housing Census*, Whole Kingdom, National Statistical Office

17-1 Mean Length of Infants from Birth to One Year

(cm)

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
(1) INDONESIA	Bogor	1978	M F	49.7 49.1	53.8 52.9	60.4 58.9	66.6 64.5	70.3 68.5	73.3 71.9
(2) JAPAN	National	1980	M F	49.7 49.3	56.0 55.2	62.7 61.1	68.1 66.8	72.0 70.6	75.5 74.1
MALAYSIA									
(3) PHILIPPINES	National	1986	M F	49.9 48.7	53.7 52.2	59.7 58.1	65.9 64.2	69.4 68.0	71.7 70.6
(4) SINGAPORE	Malays	1972	M F			60.2 59.5	65.3 64.0		73.6 71.5
	Chinese	1972	M F			61.8 60.0	66.5 65.0	71.0 69.5	74.5 73.0
(5) THAILAND	Bangkok	a)	M F	50.5 49.9	56.1 55.0	62.0 60.3	67.8 65.9	71.9 69.6	73.5 72.2

Source : (1) *Indonesian Nutrition*, Vol. X, No. 1, 1985

(2) Ministry of Health and Welfare

(3) Food and Nutrition Research Institute

(4) Ministry of Health

(5) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976Note: a) Data from National Center for Health Statistics
of the United States, 1977

17-2 Mean Weight of Infants from Birth to One Year

(kgw)

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
(1) INDONESIA	Bogor	1978	M F	3.2 3.0	4.2 3.9	5.9 5.5	7.5 6.9	8.4 7.7	8.9 8.5
(2) JAPAN	National	1980	M F	3.23 3.16	5.08 4.76	6.84 6.24	8.15 7.71	9.04 8.47	9.71 9.09
(3) MALAYSIA	Peninsular Malaysia	1986	T	3.14					
(4) PHILIPPINES	National	1987	M F	3.21 2.96	4.21 3.87	5.77 5.32	7.22 6.70	7.93 7.43	9.3 9.0
(5) SINGAPORE	Malays	1972	M			6.0	7.2	8.1	8.8
			F			5.5	6.3	7.4	8.0
	Chinese	1972	M			6.5	8.1	8.9	9.2
			F			6.5	8.0	8.8	8.9
(6) THAILAND	Bangkok		M F	3.12 3.01	4.65 4.46	6.35 5.61	7.74 7.33	8.62 7.97	9.10 8.50

Source : (1) *Indonesian Nutrition*, Vol. X, No. 1, 1985

(2) Ministry of Health and Welfare, Japan

(3) Ministry of Health

(4) Food and Nutrition Research Institute

(5) Ministry of Health

(6) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976

17-3 Mean Chest Circumference of Infants from Birth to One Year

(cm)

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
(1) INDONESIA	Bogor	1976	T	—	36.3	40.4	43.1	44.5	45.4
(2) JAPAN	National	1980	M F	32.5 32.4	39.1 38.2	42.4 41.2	44.6 43.6	46.1 44.9	47.0 45.7
MALAYSIA									
(3) PHILIPPINES	National	1987	M F	34.46 34.32	37.75 36.75	41.68 39.95	43.53 42.12	44.07 43.22	46.08 44.96
SINGAPORE									
(4) THAILAND	Bangkok		M F	32.0 31.9	37.9 37.5	41.0 40.1	43.4 42.7	44.7 43.5	75.8 44.1

Source : (1) *Berita Ilmu Pengetahuan dan Teknologi*, LIPI, 1980

(2) Ministry of Health and Welfare

(3) Food and Nutrition Research Institute

(4) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976

17-4 Mean Height by Age (1-18)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI										
(1) INDONESIA	West Sumatra Central Java and West Nusa Tenggara	1988	M F						108.9 108.0	111.7 110.7
(2) JAPAN	National	1988	M F	(3) 79.9 (3) 78.5	(3) 89.2 (3) 88.6	(3) 96.9 (3) 96.2	(3) 103.5 (3) 102.8	110.8 110.1	116.7 115.9	122.3 121.6
(4) MALAYSIA	National	1960	M F						105.4	109.7 109.7
PHILIPPINES	(5) National	1987	M F	75.7 75.0	84.6 83.0	91.0 90.9	97.9 96.9	102.9 102.6	108.4 108.1	114.2 113.9
	(6) Makati (Metro - Manila)	1989	M F						110.7 111.4	115.6 114.0
(7) SINGAPORE	National	1983	M F						116.2 115.4	121.1 120.5
(8) THAILAND	a) Bangkok	1984	M	(4) 73.5	(4) 83.8	(4) 93.5	(4) 100.5	(4) 105.0	113.5	116.9
	b) Ubonrachatani		F	72.2	84.0	93.0	99.0	103.5	115.7	116.2

Source : (1) Report on Height and Growth of First Year Preliminary School Children in 1988/89 Ministry of Population and Environment and Centre for Nutrition Research and Development, 1989, p30-32

(2) Ministry of Education, Science and Culture

(3) *National Nutrition Survey*, 1987, Health Service bureau, Ministry of Health and Welfare

(4) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976

(5) Food and Nutrition Research Institute

(6) Ashizawa's Laboratory, Otsuma Women's University

(7) Ministry of Health

(8) Ohsawa's Laboratory, Otsuma Women's University

Note: a) 1-5 years of age

b) b-18 years of age

(cm)

Age										
8	9	10	11	12	13	14	15	16	17	18
113.5 112.6										
127.9	133.0	138.2	144.1	150.9	158.4	164.1	167.7	169.6	170.3	(3) 170.8
127.2	132.9	139.3	145.9	151.2	154.6	156.3	157.0	157.5	157.8	(3) 157.0
111.8 112.8	114.3 117.9	121.9 123.4	129.3 131.8	133.4 137.2	138.4	141.4				
118.4 118.8 126.2	123.0 123.4 131.1	126.8 128.9 135.4	131.7 135.2 140.6	137.8 140.8 148.2	144.7 144.8 156.1	149.5 147.6 162.2	155.1 149.8 165.5	159.2 150.4 166.8	161.2 150.6 167.8	163.0 151.5 165.8
125.7 119.8 117.2	131.3 124.9 124.6	137.3 129.9 131.6	143.9 133.8 139.8	148.7 140.6 140.6	152.4 147.2 146.9	154.6 153.0 148.0	155.6 158.1 148.0	155.4 159.5 150.9	155.7 162.4 149.6	157.7 163.7 150.9
123.1 121.1	127.0 127.2	130.9 133.9	137.5 139.5	141.8 148.1	148.9 147.7	155.1 149.4	158.3 150.9	162.4 154.5	163.1 153.6	163.1 153.6

17-5 Mean Weight by Age (1-18)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI										
(1) INDONESIA	National	1977	M F		10.4 10.1	12.1 11.6	13.8 13.2	15.5 14.5	15.7 15.7	18.2 17.0
JAPAN (2)	National	1988	M F	(3) 10.9 (3)	(3) 12.7 (3)	(3) 14.7 (3)	(3) 16.1 (3)	19.2	21.4	23.9
				10.1	12.2	14.4	15.7	18.9	20.9	23.3
(4) MALAYSIA	National	1960	M F						16.4	17.8 18.6
PHILIPPINES	(5) National	1987	M F	9.3 9.0	11.3 10.7	12.7 12.4	14.4 13.8	15.5 15.2	17.3 16.7	19.1 18.8
	(6) Makati (Metro - Manila)	1989	M F						17.9 18.1	19.4 18.0
									20.6 19.9	22.6 22.4
(7) SINGAPORE	National	1983	M F							
(1) THAILAND	a) Bangkok	1984	M	(4) 9.1	(4) 11.0	(4) 13.4	(4) 15.1	(4) 16.8	18.8	20.4
	b) Ubonrachatani		F	8.5	10.9	13.0	14.5	16.1	18.0	19.5

Source : (1) Ohsawa's Laboratory, Otsuma Women's University
 (2) Ministry of Education, Science and Culture
 (3) *National Nutrition Survey*, 1987, Health Service Bureau, Ministry of Health and Welfare
 (4) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976
 (5) Food and Nutrition Research Institute
 (6) Ashizawa's Laboratory, Otsuma Women's University
 (7) Ministry of Health

Note: a) 1-5 years of age
 b) 6-18 years of age

(kg)

Age										
8	9	10	11	12	13	14	15	16	17	18
19.9 19.2	21.3 21.6	23.3 23.4	25.7 26.3	27.3 30.3	31.8 33.4	37.1 37.6	40.9 40.4	44.7 43.2	46.9 44.6	48.7 45.9
26.9	30.0	33.5	37.4	42.9	48.3	53.6	58.5	60.6	61.8	(3) 62.6
26.3	29.6	33.6	38.5	43.6	47.3	49.9	52.0	52.7	52.7	(3) 51.2
19.5 18.7	20.7 21.8	24.2 24.0	27 28.5	29.5 30.0	32.5	35.5				
20.6 20.8 21.5 19.8	22.6 22.9 23.0 23.7	24.3 25.7 25.8 26.3	26.9 29.3 27.4 32.0	30.6 33.3 30.8 31.6	35.2 36.8 36.7 39.0	39.8 40.4 38.7 38.8	43.1 43.3 44.6 40.9	47.3 45.3 45.3 43.4	49.5 46.0 49.3 43.3	51.9 46.3 50.7 44.1
25.3 24.5	28.3 27.4	31.3 31.3	34.4 36.1	39.5 40.0	44.7 43.6	49.4 45.5	52.7 47.0	54.3 47.7	55.9 47.5	54.6 50.2
23.4 21.6	24.8 24.0	25.9 29.4	30.3 31.6	31.1 38.4	37.9 38.4	44.9 40.7	46.7 45.0	51.0 47.8	51.8 47.4	53.0 49.1

18 Definitions Used in Hospital Statistics (WHO)

	Definition
1. Hospital	Any establishment permanently staffed by at least one physician that can offer inpatient accommodation and providing principally custodial care should not be included.
2. General Hospital (principal)	A hospital-other than local or rural hospitals providing medical and nursing care for more than one category of medical discipline (e.g., general medicine, specialized medicine, general surgery, specialized surgery, obstetrics, etc.)
3. Local or Rural Hospital	A hospital, usually in rural areas, permanently staffed by one or more physicians, which in respect of their functions is also a general hospital, but provides medical and nursing care of a more limited range than that provided by principal general hospitals.
4. Medical and Maternity Centre with Beds	A small unit, also known as rural health centre, bedded dispensary, a rural maternity home, etc., not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.), which offers inpatient accommodation and provides a limited range of medical and nursing care.
5. Specialized Hospital	A hospitals providing medical and nursing care primarily for only one discipline. This category does not include the specialized department administratively attached to a principal general hospital and sometimes located in an annex or separate building ; their beds (and the related data) are included with the principal general hospital.
6. Government Hospital	Any hospital administered by a government authority at any level, whether central, intermediate, or local.

	Definition
7. Private Non-profit-making Hospital	Any hospital, whether subsidized by the government or not, operated on a non-profit-making basis by a non-government body, such as a religious missions, an industrial enterprise, a trusts, or a philanthropic institution.
8. Private Profit-making Hospital	Any private hospital (or medical establishment with beds) operated on a profit-making basis.
9. Bed	A hospital bed is one regularly maintained and staffed for the accommodation and fulltime care of a succession of inpatients and is situated in wards or a part of the hospital where continuous medical care for inpatients is provided. The total of such beds constitutes the normally available bed complement of the hospital. Cribs and bassinets maintained for use by healthy newborn infants who do not require special care should not be included.
10. Admission	An inpatient admission is the formal admission by a hospital of an inpatient and always involves the allocation of a hospital bed. Healthy babies born in the hospital should not be counted if they do not require special care.
11. Discharges (including deaths)	The number of persons, living or dead, whose stay has terminated and whose departure has been officially recorded.
12. Patient days	Total of daily censuses of inpatients in the hospitals during the year. Not included in the daily censuses are healthy babies born in the hospitals if they do not require special care. The day of admission and the day of discharge should be counted together as one day.

18-1 Comparative Table on Medical Establishments

	Indonesia (1988)	Japan (1987)	Malaysia (1987)			Philippines (1987)	Singapore (1988)	Thailand (1987)
			Peninsular Malaysia	Sabah	Sarawak			
1 General Hospital	V	V	V	V	V		V	V
2 General & Rural Hospital	V							V
3 Local or Rural Hospital	V		(1) V	(1) V	(1) V			V
4 Medical Center	V					V		V
5 Medical Meternity Center	V							V
6 Maternity Hospital	V					V	V	V
7 Infectious Diseases Hospital	V	V				V		V
8 Chronic Diseases Hospital							V	
9 Leprosy Hospital	V	V	V		V	V		V
10 Tuberculosis Hospital	V	V	V			V		V
11 Pediatrics Hospital						V		V
12 Dermato - Venerology Hospital							V	V
13 Ophthalmology Hospital	V						V	V
14 Orthopedics Hospital	V					V		
15 Mental Hospital	V	V	V	V	V	V	V	V
16 Cancer Hospital	V							V
17 Estab. for Drug Addicts	V		V			V		V
18 Tropical Diseases Hospital						V		V
19 Other Specialized Hospital	V					V		

Source : (1) District & Divisional Hospitals

18-2 Hospitals and Other Medical Establishments with Beds (1)

	Year	1 General Hospitals				2 General and Rural Hospitals				3 Local or Rural Hospitals			
		Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days
BRUNEI	1988	8	971	a) 23,396	a) 91,118								
(1) INDONESIA	1988	749	90,281	2,809,608	18,072,435								
JAPAN	1987	8,716	1,299,787	9,058,606	390,207,657	..				..			
(2) MALAYSIA	1988	16	13,449	625,425	3,542,514					b) 79	10,625	589,306	2,520,642
Peninsular Malaysia		12	11,554	526,887	3,004,128					53	9,428	440,334	1,777,662
Sabah		3	1,159	61,855	306,342					12	1,342	61,553	255,102
Sarawak		1	736	36,683	232,044					14	1,750	87,419	487,878
(3) PHILIPPINES	1987	537	40,829		7,651,859	75	7,850			..			
SINGAPORE	1988	14	6,029	298,136	1,554,045	..				..			
(4) THAILAND	1987	70	21,464			259	44,472			541	11,215		

Source: Ministry of Health in each country

(1) Directorate of Medical Care, Ministry of Health

(2) Information and Documentation System Unit

(3) *Hospital Operations & Management Services, Department of Health*

(4) Health Statistics Division, Ministry of Public Health

Note: a) Based on 4 government hospitals

b) District hospitals

c) Excluding one medical center

d) Special hospitals under Department of Health

4 Medical Centre				5 Medical & Maternity Centres				6 Maternity Hospitals			
Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days
				—	—	—	—	39	2,109	61,701	248,499
..				..				..			
..				..				..			
8	2,770	c) 108,245	d) 631,703					d) 1	700	36,856	176,396
..				..				1	510	34,451	114,515
4	56			..				7	1,108		

18-2 Hospitals and Other Medical Establishments with Beds (2)

	Year	7 Infectious Diseases Hospitals				8 Chronic Diseases Hospitals				9 Leprosy Hospitals			
		Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days
BRUNEI													
INDONESIA	1988	1	76	3,847	11,146	..				25	3,077	2,491	870,542
JAPAN	1987	13	1,093	320	9,768	..				16	9,997	151	2,641,058
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	..				..				2	1,102	1,898	174,582
										1	836	1,511	145,688
										1	266	387	28,914
PHILIPPINES	1987	a) 1	900	31,638	172,254			..				..	..
SINGAPORE	1988	..				1	456	274	100,085	..			
THAILAND (7)	1987	2	430			..	..	..	..	3	1,750		

Note: a) Special hospitals under Department of Health
b) Under Department of Health

10 Tuberculosis Hospitals				11 Pediatrics Hospitals				12 Dermato-Venereology Hositals			
Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days
11	757	6,759	162,198	..				..			
20	1,900	1742	499,246	..				..			
1	276	2,386	44,652								
1	276	2,386	44,652								
1	738	7,556	181,720	b) 1	450	13,516	97,139	..			
..				..				1	35	669	6,326
2	549			1	538			1	43		

18-2 Hospitals and Other Medical Establishments with Beds (3)

	Year	13 Ophthalmology Hospitals				14 Orthopedics Hospitals				15 Mental Hospitals			
		Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days
BRUNEI													
INDONESIA	1988	7	584	8,337	66,710	1	200	1,204	43,863	43	7,515	26,245	2,299,908
JAPAN	1987	..				..				1,047	257,542	163,380	94,260,167
MALAYSIA	1988					..				3	2,720	8,006	1,606,008
Peninsular										2	5,080	6,703	1,432,158
Malaysia										1	302	421	70,638
Sabah										1	338	882	103,212
Sarawak													
PHILIPPINES	1987	..				a) 1	700		255,500	a) 1	5,200		
SINGAPORE	1988	1	20	198	1,220	..				3	2,795	6,125	919,528
THAILAND	1987	4	110			..				12	6,895		

Note: a) A special hospital under Department of Health

b) A hospital under Department of Health

16 Cancer Hospitals				17 Establ. for Drug Addicts				18 Tropical Diseases Hospitals			
Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days
1	60			1	30	233	5,121	..			
..				..				..			
..				21		1,563		b) 1	50	929	8,933
..				..				..			
1	220			2	570			1	213		

18-2 Hospitals and Other Medical Establishments with Beds (4)

	Year	19 Other Specialized Hospitals				20 Total			
		Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days
BRUNEI	1987					8	971	23,396	91,118
INDONESIA	1988	12	552	13,608	63,583	1,493	116,847	2,934,239	21,844,529
JAPAN	1987					9,812	1,570,319	9,224,199	487,617,896
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988					102	33,067	1,227,021	7,888,398
						69	27,174	977,821	6,404,268
						16	2,803	123,829	632,082
						17	3,090	125,371	852,048
PHILIPPINES	1986	3	603	17,885	135,223	48	57,470	229,716	3,040,520
SINGAPORE	1988	..				22	9,810	339,853	2,695,719
THAILAND	1987					910	89,633		

Fig.6 Annual Change of Number of Beds (per 100,000)

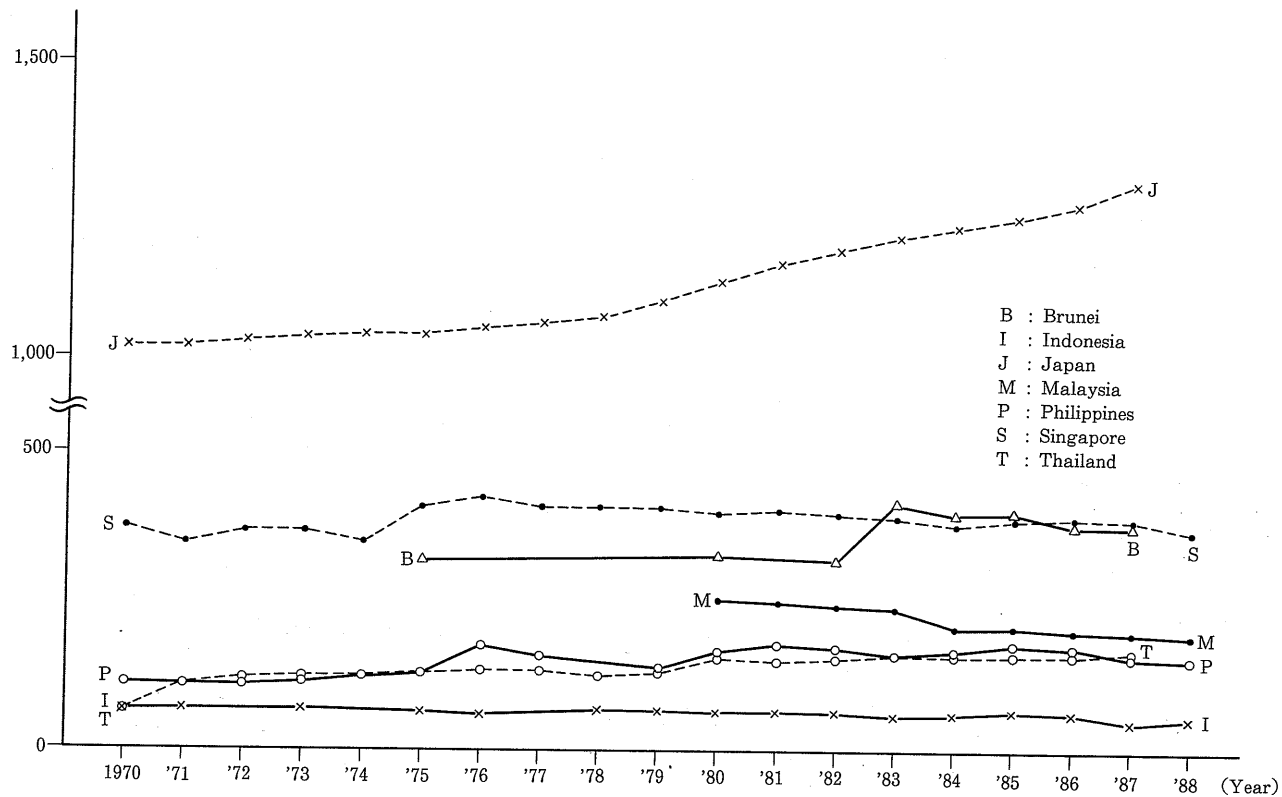


Fig.7 Annual Change of Number of Physicians (per 100,000)

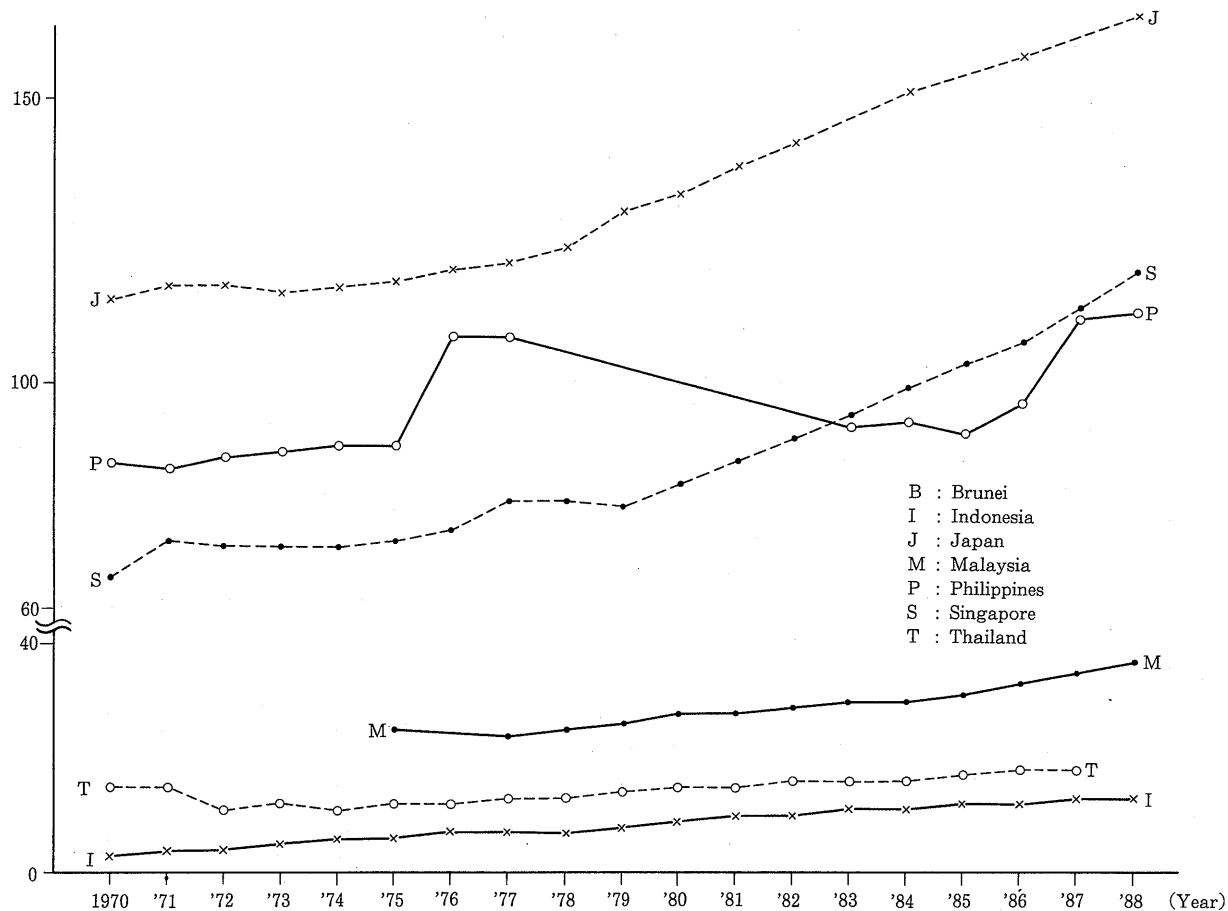
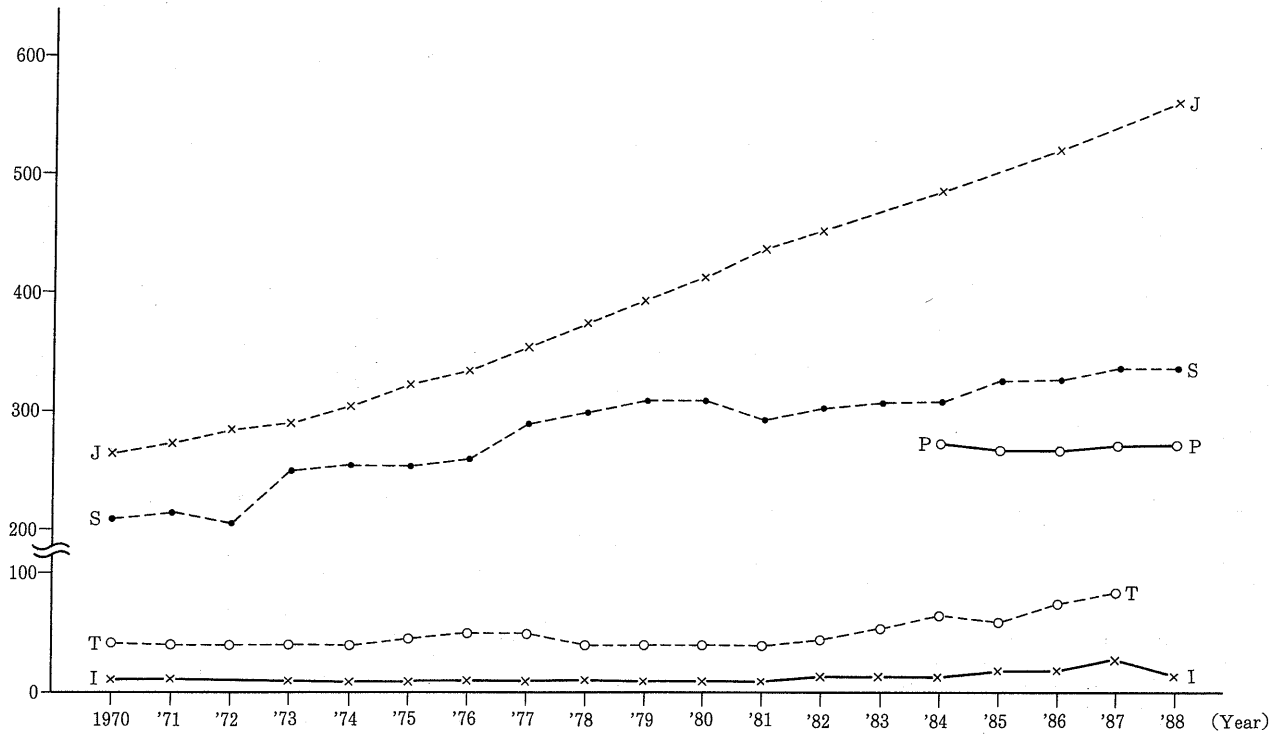


Fig.8 Annual Change of Number of Nurses (per 100,000)



18-3 Hospital Utilization by Category of Hospital (1)

	Year	All Hospitals					General Hospitals					
		Type	Population per Bed	Bed per 10,000 Population	Admissions per 10,000 Population	Bed Occupancy Rate(%)	Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay (Days)
									per 10,000 Population	per Bed		
BRUNEI	1988		249	40	969	33		40	969	249	33	
(1) INDONESIA	1988		1,503	6.65	167.00	51.20		5.1	160.00	31.12	54.8	6.0
JAPAN	1987	T	77.2	129.4	754.5	85.1	T	95.1	740.9	7.0	82.2	43.1
(2) MALAYSIA	1988	A	512	19.5	725.1	65.2	A	7.9	348.3	46.5	71.9	5.66
Peninsular			514	19.5	700.5	64.4		8.3	315.4	45.6	71.0	5.70
Malaysia			489	20.4	903.2	61.6		8.5	448.9	53.4	72.2	4.95
Sabah			515	19.4	788.0	75.3		4.6	549.5	49.8	86.1	6.32
Sarawak												
(3) PHILIPPINES	1987	T	3,276	3.1	43.1	45.45						
SINGAPORE	1988	T	270	37.1	1,283.9	76.7	T	22.8	1,126.3	49.5	72.8	5.2
(4) THAILAND	1987		718	13.9				4.0				

Source: (1) Directorate of Medical Care, 1986
(2) Information and Documentation System Unit
(3) Hospital Operations & Management Service 1987
(4) Health Statistics Division

Note: Type of hospitals
T = Total
A = Government hospital establishments

Local or Rural Hospitals						Medical and Maternity Centers					
Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay(Days)	Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay(Days)
		per 10,000 Population	per Bed					per 10,000 Population	per Bed		
T						T					
A	6.28	348.3	55.4	64.8	4.3						
	6.75	315.4	46.7	51.5	4.0						
	9.65	448.9	45.9	51.9	4.1						
	10.99	549.5	49.9	76.2	5.6						
..							..				
	2.1										

18-3 Hospital Utilization by Category of Hospital (2)

	Year	Tuberculosis						Mental Hospitals			
		Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay(Days)	Type	Beds per 10,000 Population	Admissions	
				per 10,000 Population	per Bed					per 10,000 Population	per Bed
BRUNEI											
(1) INDONESIA	1988		0.04	0.38	8.92	58.7	24.00		0.43	1.49	3.49
JAPAN	1987	T	4.0	0.14	0.92	72.0	276.2	T	28.4	13.36	0.63
MALAYSIA	1988	A	0.16	1.41	8.64	44.2	18.7	A	3.4	4.7	1.4
Peninsular			0.20	1.71	8.64	44.2	18.7		3.6	4.8	1.3
Malaysia									2.2	3.1	1.4
Sabah									2.1	5.5	2.6
Sarawak											
PHILIPPINES	1987	T	0.1	1.35		76	22	Special	0.9	0.7	
SINGAPORE	1988		..						T	10.6	23.1
THAILAND	1987		0.1						1.3		

Source: (1) Directorate of Medical Care, 1986

		Maternity Hospitals					
Bed Occupancy Rate(%)	Average Length of Stay (Days)	Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay (Days)
				per 10,000 Population	per Bed		
83.8	88	T	0.12	3.51	29.2	32.30	3.93
100.3	579.8						
76.7 77.0 63.9 83.4	200.6 213.6 167.8 117.2						
76.90	28.9	Special	0.13	6.6		69	2.2
89.3	153.5	T	1.9	130.1	67.6	63.5	3.3
		A	0.2				

18-4 Number of Hospitals

		1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI	Total		6	8	8	8	8	8	8	
INDONESIA		1,164	1,115	1,208	1,273	1,306	1,367	1,408	a) 1,436	1,500
JAPAN		7,974	8,294	9,055	9,515	9,574	9,608	9,699	9,841	10,034
MALAYSIA					96	98	101	101	102	102
Peninsular		64			64	65	68	68	69	69
Malaysia			15		16	16	16	16	16	16
Sabah		14	14		16	17	17	17	17	17
Sarawak										
	Total	650	927	2,020	1,706	1,839	1,815	1,846	1,805	1,805
PHILIPPINES	Public	220	316	413	527	b) 612	624	b) 617	619	619
	Private	430	611	1,607	1,179	1,227	1,191	1,229	1,186	1,186
	Total	16	22	26	23	22	22	22	22	21
SINGAPORE	Government	11	14	13	11	11	10	10	c) 11	c) 10
	Private	5	8	13	12	11	12	12	11	11
THAILAND	Total	98	281	636	808	850	856	888	910	

Source: Ministry of Health in each country

Note: a) Directorate of Medical Care, MOH, Indonesia, 1987
b) Include : medical centers, regional provincial, district, municipal, special, sanitarries & medicare community hospitals under department of Health
c) Include Government restructured hospital

18-5 Number of Beds

		1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI			506	630	876	876	876	876	876	
INDONESIA		86,022	83,696	98,543	103,586	104,966	110,361	a) 111,300	112,328	116,847
JAPAN		1,062,553	1,164,098	1,319,406	1,440,381	1,467,050	1,495,328	1,533,887	1,582,393	1,634,309
MALAYSIA				a) 35,291	35,779	32,669	32,495	a) 32,960	33,161	33,067
Peninsular Malaysia		27,927		a) 29,792	29,661	26,993	26,491	27,185	27,272	27,174
Sabah			2,233	a) 2,670	2,950	2,534	2,809	2,799	2,799	2,803
Sarawak		2,000	2,358	a) 2,829	3,168	3,142	3,195	2,976	3,090	3,090
Total		40,289	55,323	81,976	84,142	90,279	89,668	97,735	90,414	90,414
PHILIPPINES				b) 39,625	45,187	47,861	48,045	57,470	50,703	50,703
Public		19,725	27,075	42,351	38,955	42,418	41,623	40,265	39,711	39,711
Private		20,564	28,248							
Total		7,760	9,311	9,585	9,859	9,687	10,000	10,189	10,185	9,810
SINGAPORE				c) 8,078	8,222	8,085	8,329	8,352	8,349	7,971
Government		6,891	8,211	1,507	1,637	1,602	1,671	1,837	1,836	1,839
Private		869	1,100							
THAILAND				d) 71,718	78,438	81,070	d) 84,045	d) 84,438	89,633	
Total		25,619	52,652							

Source: Ministry of Health in each country

Note: a) Including those in government hospitals
b) Including other Government agencies
c) Including Government restructured hospital
d) Including private maternity centres

19 Definition of Medical Personnel (WHO)

	Definition
1. Physicians High (university) level	All graduates of a medical school of faculty actually working in your country in any medical field (practice, teaching, administration, research, laboratory, etc).
2. Medical Assistants Middle level	Personnel performing duties ranging from simple curative procedures for common diseases to wider medical care that may include a variety of diagnostic, curative and preventive practices. These personnel have no medical education of university level or equivalent.
3. Multipurpose Health Auxiliaries Basic level	Personnel who may have no more than elementary general education and a few months of in-service training and who provide basic health services at the village level.
4. Dentists/Dental Surgeons (a) High (university) level (b) Middle (non-university) level	(a) All graduates of a dental school (or faculty of odontology or stomatology) actually working in your country in any dental field. (b) Personnel qualified from a dental school of non-university level and licensed to practice dentistry in your country.
5. Dental Operating Auxiliaries	Personnel performing a limited range of diagnostic, preventive, and curative services in dentistry. These personnel usually do not have complete dental education of university level or equivalent.
6. Dental Non-operating Auxiliaries (a) Dental laboratory technicians (b) Dental chairside	Dental non-operating auxiliaries who assist dentists and dental operating auxiliaries in their clinical work but do not carry out any independent intra-oral procedures. These dental personnel usually have technical training either in formal courses or by apprenticeship.

	Definition
7. Pharmacists/Chemists High (university) level	All graduates of a faculty or school of pharmacy actually working in your country in pharmacies, hospitals, laboratories, industry, etc.
8. Pharmaceutical Assistants Middle level	Personnel assisting in pharmacies, hospitals, or dispensaries to make and dispense medications, under the supervision of a pharmacist. These personnel do not have pharmaceutical education of university level or equivalent.
9. Veterinarians/Veterinary Surgeons High (university) level	All graduates of a faculty or school of veterinary medicine actually working in your country in any field of veterinary activity, including teaching and public health.
10. Animal Health Assistants Middle level	Personnel carrying out limited diagnostic, preventive, and curative veterinary services. These personnel have no veterinary education of university level.
11. Professional Midwives High level (a) Non-nurse midwives (b) Nurse-midwives	All graduates of a midwifery school actually working in your country in any field of midwifery (practice in institutions and community health services, teaching, administration, private practice, etc.)
12. Assistant Midwives/Auxiliary Midwives Middle level	Personnel carrying out midwifery duties in normal obstetrics, in institutions and other health services, in principle under the supervision of a professional midwife. These personnel do not have the full education and training of a professional midwife.
13. Auxiliary Nurse-midwives Middle level	Personnel performing certain nursing duties and midwifery duties in normal obstetrics, in principle under the supervision of a professional nurse or midwife. These personnel have simpler education and training in nursing and midwifery than that the professional nurse-midwife.

	Definition
14. Professional Nurse High level	All graduates of a nursing school working in your country in any nursing field (general nursing, specialized clinical nursing services in mental health, pediatrics, cardiovascular diseases, etc. - public health or occupational health, teaching, administration, research, etc.). These personnel are qualified and authorized to provide the most responsible and competent professional nursing service.
15. Assistant Nurses/Auxiliary Nurses Middle level	Personnel performing general patient care of a less complex nature in hospitals and other health services, in principle under the supervision of a professional nurse. These personnel do not have the full education and training of a professional nurse.
16. Nursing and Mid-wifery Aids Basic level	Personnel performing specified non-technical tasks in institutions or community health services under nursing supervision. These personnel usually have on-the-job or short training.
17. Physiotherapists/Physical therapists	Professional personnel treating patients by exercise, physical means, and massage, usually as prescribed by a physician.
18. Medical Laboratory Technicians High-level Technicians	Professionals who have graduated from a school for laboratory technicians and work under the responsibility of a scientific or medical specialist. They also participate in the supervision, teaching and training of subordinate technical personnel.
19. Assistant Medical Laboratory Technicians Middle-level	Auxiliary technical laboratory personnel working under the supervision of a professional laboratory technologist or technician. These auxiliary personnel do not have the full training and theoretical knowledge of the professional.

	Definition
20. Medical Physicists High (university) level	All graduates of a university or faculty of natural science with qualification in physics and mathematics and special education and training in the field of medical physics.
21. Medical Radiological Technicians High-level Technicians	Professionals who have graduated from a school for radiological technicians and work under the general responsibility of a specialist or physician in the field of radiology. If possible, indicate the distribution of medical activity : (a) MRT (General) (b) MRT (Diagnosis) (c) MRT (Therapy)
22. Assistant Medical radiological Technicians Middle-level Technicians	Auxiliary medical radiological personnel working under the direct supervision of a medical radiological technician or under a specialist or physician. Professionally qualified engineers specialized in the prevention, control, and management of environmental factors that influence man's health adversely, e.g., in the design and operation of facilities for control and the planning and administration of environmental health programmes.
23. Sanitary engineers High (university) level	
24. Sanitarians High-level Technicians	Professional personnel other than physicians inspecting the environment, promoting measures to restore or improve sanitary conditions (food inspection, inspection of public premises, etc.) and supervising the implementation of these measures.
25. Auxiliary Sanitarians Middle-level Technicians	Personnel who perform to a limited extent the functions of a professional sanitarian but do not have the full training and theoretical knowledge of the professional.

	Definition
26. Other Scientific or Professional Personnel examples: Biochemists Biologists Entomologists Psychologists Nutritionists Dietitians Occupational therapists Speech therapists Other special therapists Health educators Health statisticians Medical record librarians	Scientific (university) or professional personnel working in the health field, but not classifiable under previous items (e.g., excluding physicians).
27. Other Technical Personnel examples: Cardiology technicians Encephalographers Opticians Orthopaedic technicians Hearing aid technicians Health statistical technicians Medical records technicians	Technical personnel in the health field not classifiable under previous items.

	Definition
28. Other Health Auxiliaries and Aides examples: Microscopists Laboratory aides Dark-room assistants	Health auxiliaries not classifiable under previous items, who generally have not more than primary general education and an elementary technical training by apprenticeship or in-service training.
29. Practitioners of Traditional Medicine/Midwifery examples: Herb doctors Ayurvedic doctors Lay medical practitioners Medicine men Acupuncturists Traditional birth attendants	

19-1 Comparative Table on Medical Personnel

	Brunei (1988)	Indonesia (1987)	Japan (1987)	Malaysia (1988)			Philippines (1987)	Singapore (1988)	Thailand (1987)
				Peninsular Malaysia	Sabah	Sarawak			
1 Physicians	✓	✓	✓	✓	✓	✓	✓	✓	✓
2 Medical assistants				✓	✓	✓			✓
3 Multipurpose health auxiliaries				✓	✓	✓	✓		✓
4 Dentists/Dental auxiliaries	✓	✓	✓	✓	✓	✓	✓	✓	✓
5 Dental operation auxiliaries	✓	✓	✓	✓	✓	✓	✓	✓	✓
6 Dental non-operating auxiliaries		✓	✓		✓	✓		✓	✓
7 Pharmacists/Chemists	✓	✓	✓	✓	✓	✓	✓	✓	✓
8 Pharmaceutical assistants	✓	✓		✓	✓	✓		✓	✓
9 Veterinarians/Veterinary surgeons	✓	✓	✓				✓	✓	✓
10 Animal health assistants								✓	✓
11 Professional midwives	✓	✓	✓	✓	✓	✓	✓	✓	✓
12 Assistant midwives/Auxiliary midwives	✓	✓		✓	✓	✓			✓
13 Auxiliary nurse-midwives	✓	✓		✓	✓	✓			✓
14 Professional nurses	✓	✓	✓	✓	✓	✓	✓	✓	✓
15 Assistant nurses/Auxiliary nurses	✓	✓	✓	✓	✓	✓		✓	✓
16 Nursing and miwifery aids		✓		✓	✓	✓	✓		✓
17 Physiotherapists/Physical therapists	✓	✓	✓	✓	✓	✓	✓	✓	✓
18 Medical laboratory technicians	✓	✓	✓	✓	✓	✓	✓	✓	✓
19 Assistant medical laboratory technicians	✓	✓	✓	✓	✓	✓		✓	✓
20 Medical physicist	✓		✓	✓				✓	✓
21 Medical radiological technicians	✓	✓	✓	✓	✓	✓	✓	✓	✓
22 Assistant medical radiological technicians	✓	✓	✓	✓	✓	✓		✓	✓
23 Sanitary engineers		✓		✓	✓	✓	✓	✓	✓
24 Sanitarians	✓	✓		✓	✓	✓	✓	✓	✓
25 Auxiliary sanitarians	✓	✓		✓	✓	✓		✓	✓

	Brunei (1988)	Indonesia (1987)	Japan (1987)	Malaysia (1988)			Philippines (1987)	Singapore (1988)	Thailand (1987)
				Peninsular Malaysia	Sabah	Sarawak			
26 Other scientific or professional personnel		✓	✓	✓	✓	✓		✓	✓
27 Other technical personnel			✓	✓	✓	✓		✓	✓
28 Other health auxiliaries and aides		✓		✓	✓	✓		✓	✓
29 Practitioners of traditional midwifery		✓		✓	✓	✓			
30 Dental nurses		✓		✓	✓	✓		✓	
31 Nurses including nurse-midwives		✓		✓	✓	✓		✓	
32 Orthopaedic technicians									✓
33 Malaria field officers							✓		
34 Medical social technicians									
35 Health statistics technicians	✓			✓					✓
36 Medical statisticians	✓			✓					✓
37 Dental hygienists			✓				✓		✓
38 Trained or rural midwives				✓			✓		✓
39 Traditional birth attendants							✓		✓
40 Laboratory aides									✓
41 Sanitary inspectors							✓		
42 Medical social workers	✓		✓				✓	✓	
43 Dental practitioners				✓	✓	✓		✓	
44 Veterinary assistants								✓	
45 Nurse-midwives		✓							
46 Dental technicians		✓		✓	✓	✓		✓	
47 Dispensers				✓	✓	✓		✓	
48 Assistant nurse-midwives									
49 Nurses		✓	✓	✓	✓	✓	✓	✓	
50 Occupational therapists	✓		✓	✓	✓	✓	✓	✓	✓

	Brunei (1988)	Indonesia (1987)	Japan (1987)	Malaysia (1988)			Philippines (1987)	Singapore (1988)	Thailand (1987)
				Peninsular Malaysia	Sabah	Sarawak			
51 Dietitians	V	V		V	V	V	V	V	V
52 Radiographers	V			V	V	V		V	
53 Nursing auxiliaries									
54 X-ray assistant technicians	V								
55 Health inspectors	V			V	V	V		V	
56 Assistant health inspectors				V	V	V		V	V
57 Biochemists	V			V	V	V			V
58 Health educators	V	V		V	V	V	V	V	V
59 Midwives		V	V	V	V	V	V	V	
60 Microscopists	V								V
61 Health assistants	V								
62 Entomologists	V			V	V	V	V		V
63 Dental surgery assistants				V	V	V			
64 Nutritionists	V		V	V	V	V	V		V
65 Darkroom assistants									V

19-2 Medical and Allied Health Personnel (1)

	Year	1. Physicians	2. Medical Assistants	3. Multi-purpose Health Auxiliaries	4. Dentists/ Dental Surgeons	5. Dental Operating Auxiliaries	6. Dental Non-operating Auxiliaries	7. Pharmacists/ Chemists
BRUNEI	1988	171	..	..	19	36	..	8
(1) INDONESIA	1988	24,005	..	..	4,907			4,963
JAPAN	1988	201,658	..	..	70,572	a) 22,049	..	143,429
(3) MALAYSIA	1988	6,274	b) 3,066	—	1,288	—	—	1,084
Peninsular Malaysia		5,737	2,265	—	1,183	—	—	956
Sabah		252	431	—	47	—	—	70
Sarawak		285	370	—	58	—	—	58
PHILIPPINES	1988	65,893	..	e) 127,329	24,814	f) 779 b) 1,290	..	27,732
SINGAPORE	1988	3,162	..	..	688	282	b) 40	i) 526
(6) THAILAND	1987	9,580	47	257,714	1,468	642	414	3,622

Source: (1) Personnel Bureau, 1988
(2) Centre for Health Manpower Education, 1988 (P.118)
(3) *Establishment Book*, information and Documentation System Unit
(4) Radiological Health Service (P.118)
(5) Professional regulation Commission (P.120)
(6) Health Statistics Division
(7) Division of Dental Health, Department of Health by Survey, Thailand 1989 (P.120)

Note: a) Data as of Oct. 1987
b) Government only
c) DIV II. Dentist private section
d) Registered as of December, 1986
e) Barangay health workers active only as of December, 1985
f) Private
g) Department of Health only, 1986

8. Pharmaceutical Assistants	9. Veterinarians/ Veterinary Surgeons	10 Animal Health Assistant	11. Professional Midwives	12. Assistant Midwives/ Auxiliary Midwives	13. Auxiliary Nurse-Midwives	14. Professional Nurses	15. Assistant Nurses/ Auxiliary Nurses	16. Nursing & Midwives Aids
16	5	..	187	128	92	328	132	..
3,003		..	..			..		29,178
..		..	23,320	..	..	373,143	321,856	..
b) 1,442	..	..	b) 5,389	..	..	b) 12,032	b) 9,161	..
1,215	..	..	3,883	..	..	10,297	7,727	..
100	..	..	472	..	..	865	1,104	..
127	..	..	1,034	..	..	870	330	..
..	2,978	..	63,094	..	..	160,657		f) 5,178
228	57	b) 107	571	..	..	i) 6,639	i) 2,355	..
1,419	817	1,624	8,934	61	3,639	45,038	16,250	1,939

h) Ministry of Health only

i) Pharmacists only

j) Entry used for calculation of Population/Nursing and Midwifery Personnel Ratios

19-2 Medical and Allied Health Personnel (2)

	Year	17. Physio- therapists/ Physical Therapists	18. Medical Laboratory Technicians	19. Assistant Medical Laboratory Technicians	20. Medical Physicists	21. Medical Radiological Technicians	22. Assistant Medical Radiological Technicians	23. Sanitary Engineers
BRUNEI	1988	8	43	23	1	10	18	
INDONESIA ⁽²⁾	1988	145	223	775	..	145		
JAPAN	1987	7,114	43,605	1,496		24,109	3,567	..
MALAYSIA ⁽³⁾	1986	b)	b)	b)	b)			b)
Peninsular Malaysia		147	1,272	1,142	11	—	—	18
Sabah		127	1,002	959	10	—	—	15
Sarawak		5	124	28	—	—	—	1
		15	146	155	1	—	—	2
PHILIPPINES	1988	1,241	20,302			⁽⁴⁾ 3,486	..	1,322
SINGAPORE	1988	h) 17	h) 225	h) 74		h) 104	h) 37	h) 167
THAILAND ⁽⁶⁾	1987	286	609	342	151	350	635	13

24. Sanitarians	25. Auxiliary Sanitarians	26. Other Scientific or Professional Personnel	27. Other Technical Personnel	28. Other Health Auxiliaries and Aids	29. Practitioners of Traditional Medicine/ Midwifery	30. Dental Nurses	31. Nurses Including Nurse-Midwives	32. Orthopaedic Technicians
25	18	2	..	..	..	..	..	..
5,631			..			2,176	39,477	34
	..		27,721	..	..	..	..	..
—	—	—	—	—	—	1,040	—	..
—	—	—	—	—	—	791	—	..
—	—	—	—	—	—	83	—	..
—	—	—	—	—	—	166	—	..
g) 2,711	..	..	..	..	..	..	..	..
h) 232	h) 391	h) 78	h) 53	h) 83	..	319	8,994	..
363	4,699	1,014	373	90	..	..	..	18

19-2 Medical and Allied Health Personnel (3)

	Year	33. Malaria Field Officers	34. Medical Social Technicians	35. Health Statistics Technicians	36. Medical Statistician	37. Dental Hygienists	38. Trained or Rural Midwives	39. Traditional Birth Attendants
BRUNEI	1988	..	..	2	1	..	..	..
INDONESIA ⁽²⁾	1988	..	..	..	..	..	..	..
JAPAN	1987	..	..	..	..	41,992	..	..
MALAYSIA ⁽³⁾	1988	..	..	9	3	..	b) 5,389	..
Peninsular Malaysia		..	..	9	3	..	3,883	..
Sabah		..	..	..	..	..	472	..
Sarawa		..	..	..	..	..	1,034	..
PHILIPPINES	1988	h) 250	—	—	—	(5) 6	h) 8,958	h) 31,292
SINGAPORE	1988	..	..	..	..	..	..	..
THAILAND ⁽⁶⁾	1987	..	..	15	208	(7) 76		

40. Laboratory Aids	41. Sanitary Inspectors	42. Medical Social Workers	43. Dental Practitioners	44. Veterinary Assistants	45. Nurse-midwives	46. Dental Technicians	47. Dispensers	48. Assistant Nurse-midwives
..	..	1	..	..	..	..	..	..
..	..	..	..	..	39,477		2,213	..
..	..	3,957	..	..	..	..	..	..
..	..	..	c) 259	..	..	b) 305	b) 1,273	..
..	..	..	174	..	..	253	1,071	..
..	..	..	39	..	..	23	86	..
..	..	..	46	..	..	29	116	..
..	h) 1,988	315	..	..	..	..	..	..
..	..	b) 38	688	b) 10	..	b) 40	b) 198	..
18	..	..	..	..	..	..	..	..

19-2 Medical and Allied Health Personnel (4)

	Year	49. Nurses	50. Occupational Therapists	51. Dietitians	52. Radiographers	53. Nursing Auxiliaries	54. X-ray Assistant Technicians	55. Health Inspectors
BRUNEI	1988	..	5	5	10	..	18	25
INDONESIA ⁽²⁾	1988	23,084	..		137	..	..	516
JAPAN	1988	694,999	a) 2,558	..	..	..	..	..
MALAYSIA ⁽³⁾		b) 12,032	b) 43	b) 35				b) 974
Peninsular Malaysia	1988	10,297	36	27	353	..	..	776
Sabah		865	3	4	19	..	..	95
Sarawak		870	4	4	35	..	..	103
PHILIPPINES	1988	(5) 160,657	(5) c) 109	(5) 7,057	..	..	..	..
SINGAPORE	1988	8,994	b) 14	b) 13	b) 104	..	..	b) 232
THAILAND ⁽⁶⁾	1987	..	12	53		..	..	..

56. Assistant Health Inspectors	57. Bio-chemists	58. Health Educators	59. Midwives	60. Microscopists	61. Health Assistants	62. Entomologists	63. Dental Sugery Assistants	64. Nutritionists	65. Darkroom Assistants
..	15	4	..	8	18		..		9
..	..	78	15,393	..	..	..	..	1,210	..
..	..	..	23,320	..	..	..	..	a) 25,960	..
b) 2,120 1,627 216 277	b) 50 43 5 2	b) 51 45 3 3	b) 5,389 3,883 472 1,034				b) 892 806 38 48	b) 15 13 1 1	
..	..	b) 144	(5) 63,094	..	..	g) 7	..	(5) 7,057	..
b) 391	..	b) 9	571	..	..	..	..	..	..
	36	216	..	15	..	40	..	401	15

19-3 Population/Health Personnel Ratios

	Year	Physicians per 10,000 Population	Population per Physician	Dentists per 10,000 Population	Population per Dentist	Pharmacists per 10,000 Population	Population per Pharma- cist	Medical Assistants per 10,000 Population	Population per Medical Assistant	Nursing Personnel per 10,000 Population	Population per Nursing Personnel	Nursing & Midwifery Personnel per 10,000 Population	Population per Nursing & Midwifery Personnel
BRUNEI	1988	7.1	1,412	1.2	8,621	0.3	30,175			30.6	327	47.5	211
INDONESIA	1988	1.4	7,316	0.3	35,834	0.28	35,400	..	..	1.20	7,608	2.2	4,449
JAPAN	1988	16.5	605	5.78	1,729	11.75	781	..	..	57.0	176	58.9	170
MALAYSIA Peninsular Malaysia Sabah Sarawak	1988	3.7	2,697	0.8	13,137	0.6	15,610	1.8	5,519	7.1	1,406	10.3	971
		4.1	2,433	0.8	11,800	0.7	14,601	1.6	6,163	7.4	1,356	10.2	984
		1.8	5,440	0.3	29,170	0.5	19,586	3.1	3,181	6.3	1,585	9.8	1,025
		1.8	5,582	0.4	27,431	0.4	27,431	2.3	4,300	5.5	1,829	10.0	836
⁽¹⁾ PHILIPPINES	1988	11.2	891	4.23	2,366	4.72	2,117	..	..	2.1	4,825	3.8	2,606
SINGAPORE	1988	11.9	837	2.6	3,848	2.0	5,033	..	..	34.0	294	36.1	277
THAILAND	1987	1.79	5,595	0.27	36,516	0.68	14,800	0.01	1,140,532	8.40	1,190	0.36	27,646

Source: Ministry of Health in each country

(1) Professional Regulation Commission (PRC)

19-4 Number of Physicians

	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI								171	
INDONESIA	3,578	8,279	(1) 12,931	(1) 16,698	(2) 17,760	(3) 19,875	(3) 20,176	(3) 22,053	(4) 23,367
JAPAN	118,990	132,479	156,235	NA	181,101	NA	191,346	NA	201,658
(5) MALAYSIA									
Peninsular Malaysia	2,370	2,757 2,511	3,858 3,518	4,474 4,082	4,505 4,111	4,939 4,541	5,394 4,938	5,794 5,300	6,274 5,737
Sabah		104	141	174	174	174	216	225	252
Sarawak	80	142	199	218	220	224	240	269	285
PHILIPPINES	31,515	37,276	a) 7,259	(6) b) 47,989	(6) b) 49,602	(6) b) 49,602	(6) b) 53,556	63,340	65,893
(7) SINGAPORE	1,363	1,622	1,976	2,361	2,504	2,631	2,781	2,939	3,162
(8) THAILAND	5,407	5,005	6,867	7,902	8,058	8,650	9,464	9,580	

Source: (1) The Health Situation of Indonesia, Department of Health 1984
(2) Consortium Health Science, Ministry of Education and Culture
Medical Science, Jakarta, November 1984
(3) Personnel Bureau 1987
(4) Personnel Bureau 1988
(5) Medical Council, Ministry of Health

(6) Professional Regulation Commissioner (PRC)
(7) *Yearbook of Statistics*, Singapore 1988
(8) Health Statistics Division, Ministry of Health
Note: a) Department of Health Manpower only
b) Registered physicians (government & private) as of 1986

19-5 Number of Dentists

	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI								31	
(1) INDONESIA	452		1,681	2,364	2,664	a) 4,237	a) 4,237	a) 4,583	4,907
JAPAN	37,859	43,586	53,602	NA	63,145	NA	66,797	NA	70,572
(2) b) MALAYSIA		433	691	858	957	1,041	1,130	1,220	1,288
Peninsular Malaysia	15	9	630	774	867	949	1,030	1,106	1,183
Sabah			25	48	40	36	46	51	47
Sarawak			36	36	50	56	60	63	58
PHILIPPINES	12,174	13,096	c) 1,029	d) 8,057	(3) d) 20,304	(3) d) 20,542	(3) d) 22,467	23,725	24,814
(4) SINGAPORE	398	419	485	555	588	604	632	654	688
THAILAND	683	652	1,169	1,247	1,326	1,451	1,395	1,468	

Source: (1) The Health Situation of Indonesia, 1984
(2) Dental Council
(3) Professional Regulation Commissioner (PRC)
(4) Ministry of Health

Note: a) Personnel Bureau, June, 1987
b) As of December 31
c) Government and private
d) Registered as of 1986, government and private

19-6 Number of Pharmacists

	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI								9	
⁽¹⁾ INDONESIA	1,486	1,847	3,013	3,587	a) 3,926	a) 4,268	a) 4,513	a) 4,814	a) 5,085
JAPAN	79,393	94,362	116,056	NA	129,700	NA	135,990	NA	143,429
MALAYSIA		258	488	(2) 676	b) 734	b) 843	b) 963	b) 1,050	1,084
Peninsular Malaysia				(2) 598	b) 676	732	828	929	956
Sabah			(3) 17	(4) 37	b) 29	64	84	64	70
Sarawak				(2) 41	b) 29	47	51	57	58
PHILIPPINES	19,076	20,838	c) 518	d) 25,337	(5) d) 26,005	(5) d) 26,005	26,854	27,493	27,732
⁽⁶⁾ SINGAPORE	245	288	368	387	409	436	454	487	526
⁽⁷⁾ THAILAND	1,407	1,913	2,650	2,990	3,312	3,376	3,356	3,622	

Source: (1) The Health Situation of Indonesia, Department of Health 1984
(2) *Indicator for Monitoring and Evaluation of Strategy for Health for All by the year 2000*, Information and Documentation System Unit, Ministry of Health
(3) *Annual Report*, Medical Department, Sabah, 1982
(4) Data provided by Medical Department
(5) Professional Regulation Commissioner (PRC)
(6) *Yearbook of Statistics*, Singapore 1988
(7) Health Statistics Division, Ministry of Public Health

Note: a) Directorate General, Food & Drugs Control, Ministry of Health Indonesia, 1987
b) Pharmacy Board, Ministry of Health
c) Department of Health manpower only
d) Registered pharmacists (government & private) as of 1986

19-7. Number of Midwives

	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI								185	
(1) INDONESIA	3,752	10,720	16,472	17,486	17,685	(2) 51,375	(3) 22,500	(2) 511	(4) 15,393
JAPAN	28,087	26,742	25,867	NA	24,649	NA	24,056	NA	23,320
(5) MALAYSIA								(6) a) 5,256	5,389
Peninsular Malaysia		3,767	(6) 5,002	(6) 5,432	(6) 5,468	5,673	(6) 3,795	3,819	3,883
Sabah					400	—	—	444	472
Sarawak						970	—	993	1,034
(7) PHILIPPINES	16,082	26,680	b) 9,329	14,021	c) 62,972	c) 62,972	c) 65,899	60,169	63,094
(8) SINGAPORE	1,058	930	779	710	652	650	601	586	571
(9) THAILAND	4,203	6,335	8,669	9,100	8,573	7,716	6,279	8,934	

Source: (1) *The Health Situation of Indonesia*, Department of Health, 1984
 (2) Centre for Health Manpower Education, Ministry of Health 1987
 (3) International General, Ministry of Health, September, 1986
 (4) Centre for Health Manpower Education, Ministry of Health 1988
 (5) Nursing Board, Ministry of Health
 (6) Division II, Midwives & Jururawat Desa

(7) Professional Regulation Commissioner (PRC)
 (8) *Yearbook of Statistics*, Singapore 1988
 (9) Health Statistics Division, Ministry of Public Health

Note: a) Government only
 b) Department of Health manpower only
 c) Registered as of 1986, government & private

19-8 Number of Nurses

	1970	1975	1980	1983	1984	1985	1986	1987	1988
BRUNEI								779	
(1) INDONESIA		9,856	20,201	22,487	(2) 25,834	(2) 30,515	(2) 37,618	(2) 50,881	23,084
JAPAN	273,572	361,604	487,169	NA	590,177	NA	639,936	NA	694,999
(3) MALAYSIA Peninsular Malaysia Sabah Sarawak			15,392	17,916 640	18,653 695 623	19,479 779 778	20,170 — —	21,340 — —	22,020 — —
(4) PHILIPPINES	38,918	64,155	a) 9,605	a) 11,917	b) 146,891	a) 146,891	b) 151,870	155,747	160,657
(5) SINGAPORE	4,304	5,767	7,545	7,714	7,830	8,395	8,568	8,713	8,994
(6) THAILAND	15,387	18,993	18,483	26,444	31,827	38,683	40,952	45,038	

Source: (1) *The Health Situation of Indonesia, 1984*
(2) Centre for Health Manpower
(3) Nursing Board, Ministry of Health
(4) Professional Regulation Commissioner (PRC)
(5) *Yearbook of Statistics, Singapore 1988*
(6) Health Statistics Division

Note: a) Department of Health manpower only
b) Registered as of 1986, government & private

20-1 Situation of Medical Schools

	Academic Year	Number of Medical Schools	Duration of Studies	Total Enrolment	Admissions	Graduates
BRUNEI						
(1) INDONESIA	1988	24	6 Years		7,829	a) 1,646
(2) JAPAN	1989	80	6 Years		7,795	b) 8,829
(3) MALAYSIA	1987/88	3	6 Years	2,052	—	—
(4) PHILIPPINES	1988/89	26	Pre - Med - 4 Years proper - 4 Years Intern - 1 Year	9,868	2,873	3,235
(5) SINGAPORE	1988/89	1	5 Years	c) 864 d) 134	c) 160 d) 10	c) 184 d) 40
(6) THAILAND	1987	8	6 Years			684

Source: (1) Consortium Medical Service
(2) Ministry of Education
(3) Ministry of Education
(4) Association of Philippine Medical Colleges, Manila
(5) National University of Singapore
(6) Ministry of Health

Note: a) Data up to July 1986
b) Those who succeeded in national examination
c) Singaporeans
d) Non - Singaporeans